

From liberalizing reforms to post-global financial crisis times: how the IMF changed its view on capital account liberalization and capital controls *

Diego Angelico **
Giuliano Contento de Oliveira ***

Abstract

The view of the International Monetary Fund (IMF) on capital account liberalization and capital controls has undergone important reassessments over the past two and a half decades. Several financial crises, including the 2007-2008 global financial one (GFC), propelled it to partially defend the use of capital controls to eliminate certain dysfunctions, such as financial risks and pressures on exchange rate appreciation. Our study shows that this reorientation in the scope of IMF articles also configured a response to empirical studies that pointed to flaws in orthodox theory about capital account liberalization and those that investigated the effectiveness of capital controls in emerging economies in the post-global financial crisis period. However, we are yet to find no explicit defense in favor of the use of capital controls and the permanent management of exchange rates, despite relevant empirical evidence indicating the effectiveness of these measures.

Keywords: International Monetary Fund, Capital account liberalization, Capital controls, Macroprudential policies, Financial crises.

Resumo

Das reformas liberalizantes ao pós-crise financeira global: a visão em mudança do FMI sobre liberalização da conta financeira e controles de capital

A visão do Fundo Monetário Internacional (FMI) sobre liberalização da conta financeira e controles de capital passou por importantes reavaliações ao longo das últimas duas décadas e meia. A ocorrência de diversas crises financeiras, incluindo a crise global em 2007-2008, impulsionou a instituição a defender parcialmente o uso de controles de capital que tenham o objetivo de eliminar algumas disfunções, tais como riscos financeiros e pressões de apreciação cambial. Neste artigo, argumenta-se que essa reorientação no escopo dos artigos do FMI também foi uma resposta a estudos empíricos que apontaram falhas na teoria ortodoxa sobre liberalização da conta financeira, e que analisaram a eficácia dos controles de capital impostos por economias emergentes ao longo do pós crise global. Não obstante, o FMI permanece não defendendo e recomendando o uso de controles de capital e a administração da taxa de câmbio em caráter permanente, apesar de evidências empíricas relevantes que indicam a eficácia dessas medidas.

Palavras-chave: Fundo Monetário Internacional, Liberalização da conta financeira, Controles de capital, Políticas macroprudenciais, Crises financeiras.

JEL: F38, F42, F55, F6.

1 Introduction

Among the major themes of international economics and relations in the last two decades, changes in the prescriptions of the International Monetary Fund (IMF) and studies related to capital

* Article received on August 21, 2020 and approved on January 10, 2023.

** Researcher Fellow at Center for Studies in International Economic Relations, University of Campinas, Institute of Economics (CERI-IE-Unicamp), Campinas, SP, Brazil. E-mail: diego_angelico@hotmail.com. ORCID: <https://orcid.org/0000-0002-4606-3408>.

*** Professor at Center for Studies in International Economic Relations, University of Campinas, Institute of Economics, University of Campinas, (CERI-IE-Unicamp), Campinas, SP, Brazil. E-mail: giueco@unicamp.br. ORCID: <https://orcid.org/0000-0001-6791-2643>.

account liberalization certainly configure one of the most important ones. The IMF, created in 1944 during the Bretton Woods Conference, exercised an important role during the liberalizing reforms in the 1980s and 1990s, marked by the advent of the so-called ‘second financial globalization.’ During that time, the multilateral institution pressured countries, especially developing ones, to adopt full capital account convertibility to private capital flows. Thus, unlike the external financing system that prevailed during the Bretton Woods era, the IMF started to pressure countries toward full financial account liberalization to stimulate private capital flows, particularly portfolio ones. Under the context of global financing, IMF loans started to only finance the balance of payments crises to enable structural reforms until these countries could regain access to global financial markets.

However, the content of the IMF papers that grounded unrestricted capital account liberalizations suffered significant change after the crises that hit emerging economies in the late 1990s and early 2000s. After a short period in which the institution started to moderate its prescriptions on capital account openness, the 2008 GFC and the capital controls several emerging economies implemented in the post-crisis period imposed a new ‘structural break’ in the scope of IMF papers.

Given this brief description, this study aims to explore the main papers the IMF published in the last two and a half decades to find the main discontinuity points in its prescriptions on the international mobility of capital given its role in the policies aimed at financial globalization¹.

We should point out that our critical review is based on a Keynesian-Structuralist perspective. Thus, we are able to clearly characterize the discontinuity points the IMF has shown over time – i.e., its advances, limits, and inconsistencies. More specifically, our theoretical approach is based on the notion of the ‘currency hierarchy’ that characterizes the contemporaneous International Monetary and Financial System (IMFS), i.e., the ability of only a few currencies to denominate debt contracts and derivative instruments in international markets (Prates, 2005; Prates; Cintra, 2008; Conti et al., 2014; Fritz and Prates, 2014). Consequently, we can observe that a significant share of capital flows destined to peripheral economies² – i.e., with internationally inconvertible currencies – is highly determined by exogenous factors, especially the preference of international investors’ state of liquidity.

Such dynamics, in turn, potentially promote several deleterious effects in these economies – especially in with structurally deficient current accounts (Ocampo, 2016; Oliveira, 2011; 2012) –, among which we can highlight an increase in the volatility of key macroeconomic prices and a reduction in their monetary policy independence – which, in turn, contradicts the ‘impossible trinity’ for these economies. Therefore, both empiricists and theorists from this perspective point out that the use of capital controls and macroprudential policies should be thought of as instruments available to peripheral economies to permanently deal with such inherent asymmetry of the contemporary IMFS (Andrade and Prates, 2013; Fritz et al., 2018). However, as we will argue in this article, the renewed

(1) The IMF studies are divided into papers that represent its institutional standpoint and other kinds of studies, such as working papers and policy discussion papers. The scope of these last two categories is attributed only to their respective authors, while the scope of the first category is generally attributed to the IMF’s institutional vision. Some important differences between these two kinds of publications will be highlighted through the sections and then interpreted in conclusion.

(2) The term ‘peripheral economies’ is frequently used to design economies that: i) liberalized the capital account; ii) adopt a regime of dirty floating exchange rate; and iii) whose currencies are inconvertible at international level.

IMF approaches on capital account liberalization and capital controls often fail to incorporate such a perspective.

Besides this brief introduction, this study is divided as follows. Firstly, we explore the main studies published in the period comprehending the liberalizing reforms in the 1980s and 1990s and the financial crises that hit emerging economies in the late 1990s and early 2000s. Then, we analyze the studies published between the crises in emerging economies and the 2007-2008 GFC. Section 3, in turn, discusses the main changes to IMF prescriptions on capital controls during the post-global financial crisis period. Finally, 'Conclusions' aims to synthesize the main discontinuity points in the IMF view on capital account liberalization and capital controls over the last two and a half decades.

2 From liberalizing reforms to the post-crisis period in emerging economies

Although mainstream economics generally recognized and pointed out flaws in theoretical presumptions on capital account liberalization after the crises that hit emerging economies³, their prevailing rhetoric – among which IMF publications stand out – continued to favor capital account liberalization. Within the IMF, the debate in favor of capital controls had a marginal insertion in the period between the crises in emerging economies and the 2007-2008 GFC. During this period, the multilateral institution emphasized the accomplishment of structural reforms, the necessity of following the sequencing methodology of capital account liberalization, and the threshold approach to the effects of capital account openness.

Briefly, we can subdivide the studies IMF published during a broader period into two steps or waves. The first wave disseminated studies that analyzed the structural determinants of capital controls which were still in force in the years before capital account liberalization. They analyzed the effectiveness of several controls and defended financial openness for developing countries. Other studies included in this first step took place during and after the crises in emerging economies. They investigated the causes of these crises and continued to defend capital account liberalization for emerging countries. The second wave of IMF studies took place between the crises of emerging economies and the 2007-2008 GFC. They offered a different approach on capital account liberalization, emphasizing sequencing of capital account liberalization and threshold methodologies.

2.1 Structural determinants of capital controls and financial crises

The liberalizing reforms that mostly began in the 1980s took place against a background of IMF studies and recommendations in favor of such reforms. According to this multilateral institution, the fall of the Bretton Woods order demanded a new international monetary system and hence the adaptation of countries to the free mobility of private capital flows.

(3) See Prasad et al. (2003), Prasad et al. (2007), Kose et al. (2009), and Rodrik and Subramanian (2009) on the relation between capital account liberalization and economic growth. On risk sharing and the degree of financial integration, see Kose et al. (2009), Bluedorn et al. (2013), and Lane and Milesi-Ferretti (2007). Prasad et al. (2003) and Levy-Yeyati and Calderón (2009) focus on the relation between financial openness and the intertemporal volatility of domestic consumption. On the cyclical behavior of capital flows and the influence of monetary conditions of developed economies, see Arora and Cerisola (2000), Calvo and Reinhart (2002), Kaminsky et al. (2004), and Rey (2015). Eichengreen et al. (2003), Reinhart et al. (2003), and Eichengreen et al. (2007) point out the restrictions imposed on the external liabilities of emerging economies. On sudden stops and reversals, see Rodrik and Velásco (1999), Calvo et al. (2004), and Edwards (2007).

Among the main studies on the subject, that by Johnston and Ryan (1994), an IMF working paper, aimed to analyze the effectiveness of capital controls still in force on capital outflows in several countries during the transition capital account liberalization processes⁴. The main results of their regressions established that the joint analyses of the capital controls developing economies imposed failed to avoid capital flight. However, under a disaggregated analysis, while inflow controls were effective, controls on capital outflows were not. Notably the results found for industrial countries were practically the opposite of those observed for developing economies. Despite their results pointing to the effectiveness of capital controls on outflows from some industrial countries in avoiding capital flight, maintaining such controls undesirable (Johnston; Ryan, 1994). This recommendation was based on the presumption that these controls would reduce the global welfare since they impeded greater volumes of external investments from developed countries. According to Johnston and Ryan (1994, p. 24), *[...] but such gains [with capital controls] would have to be offset against the potential loss in world welfare from restricting productive international investment flows.*'

Therefore, the authors recommended removing capital controls on the outflows still in force in industrial countries. Johnston and Ryan (1994) also recommended capital account liberalization to transition economies since such reforms would benefit these countries by more efficiently allocating financial resources. Besides, they stated that financial openness processes would help the monetary policy of transition economies and the movements in their exchange rates. Put differently, for these authors, capital account liberalization in transition economies would be essential to stabilize the balance of payments when facing domestic financial liberalization, which is characterized by strong credit expansion. For them, the international mobility of capital would also fail to influence the formation of interest rates in such countries as long as they combined capital account liberalization and a successful domestic financial liberalization.

Johnston and Tamirisa's (1998) IMF working paper also showed interest in investigating whether the capital controls remaining from the Bretton Woods order still functioned or should be removed. Thus, they aimed to analyze the structural determinants of capital controls that were in force in several developing economies and the subsequent financial openness processes in these countries.⁵ Besides identifying the structural determinants of capital controls, the authors aimed to identify negative side effects and some kind of ineffectiveness of capital controls to ground their defense of capital account liberalization. According to them, countries used to maintain capital controls for four reasons: i) macroeconomic management; ii) payment balance management; iii) the development of institutional and domestic financial systems; and iv) prudential reasons⁶.

Countries generally pursued their macroeconomic targets and the balance of payments goals via controls on capital outflows. However, these controls showed low effectiveness, especially regarding countering disequilibrium in international reserves and balance of payments (Johnston and

(4) Johnston and Ryan's (1994) study analyzed 52 developed and developing countries between 1985 and 92.

(5) Johnston and Tamirisa's (1998) study included 45 developing economies between 1993 and 96.

(6) The main variables the authors analyzed as determinants of capital control imposition were grouped as follows: 1) international reserves/importations and payment balance/GDP; 2) real interest rate, fiscal deficit, and nominal exchange rate variations; 3) bank deposits balance/GDP and the existence of future and public debt bond markets; 4) dummies indicating the occurrence of prudential flaws in financial systems.

Tamirisa, 1998). Regarding the goal of developing domestic industries and financial systems, Johnston and Tamirisa stated (1998, p. 25):

Countries with more open trade regimes tend to have higher controls on inflows and outflows related to credit operations, possibly reflecting infant industry policies aimed at promoting trade financing through domestic institutions.

However, the authors doubted the effectiveness of these measures because restrictions to external competition could offer the side effect of preventing a higher degree of domestic financial development. Regarding prudential regulation via capital controls, Johnston and Tamirisa (1998) claimed that they (especially those imposed on capital outflows) would reduce agents' capacity to diversify their investments overseas. Therefore, they recommended the substitution of these controls with microprudential policies that failed to discriminate investors' residency.

More precisely, following Johnston and Tamirisa (1998), the imposed controls on capital outflows ineffectively managed the balance of payments; the capital controls that aimed to develop domestic financial systems could bring about the opposite effect when inhibiting access to external competition. Moreover, capital controls aimed at macroeconomic management and acting as a financial repression mechanism, inefficiently allocated financial resources; those that acted as prudential measures on financial systems should be substituted by *de facto* microprudential regulation because this would neither inhibit the diversification of residents' resources overseas nor would be distortive. According to Johnston and Tamirisa (1998, p. 16),

Imposing capital controls is often a less efficient and less effective way of controlling financial risks than an oversight of the internal capacity of supervised institutions to manage risk and greater public disclosure of information; such prudential measures would have little, if any, restrictive impact on capital movements.

Rossi's (1999) IMF working paper aimed to evaluate the side effects and possible dysfunctions of capital controls that were still in force in the 1990s. This study analyzed the effects of capital controls on financial fragility and the economic growth of several countries in transition to greater capital account liberalization and domestic financial deregulation⁷. Firstly, to analyze the effects of these regulatory measures still in force during the financial crises over the considered period, Rossi (1999) estimated a first regression to identify the main determinants of the aforementioned banking crises⁸. Results pointed out that microprudential regulation reduced the probability of banking crises occurring, whereas controls on capital outflows increased it. The author attributed the latter effect to the fact that controls on capital outflows could stimulate banks to engage in offshore operations, in addition to the presumption that this kind of control could be associated with subdeveloped banking systems.

(7) Rossi's (1999) study included 15 economies engaged in greater capital account liberalization between 1990 and 97. To evaluate the effects of financial measures, the author elaborated an index of microprudential regulations; an index of explicit insurance on bank deposits; an index of aggregate control on capital inflows; and an index of aggregate controls on capital outflows.

(8) Rossi (1999) estimated a logit regression, in which the dependent variable was a dummy indicating the occurrence of a banking crisis. The author included the following explanatory variables: an index of explicit insurance on bank deposits; an index of aggregate control on capital inflows; and an index of aggregate control on capital outflows.

Rossi (1999) also elaborated a regression to analyze the effects of microprudential regulation and capital controls on the economic performance of these countries over the sampled period. According to the author, inflow controls negatively affected the growth of these economies, so capital account liberalization was expected to reduce capital cost, increase domestic investment rates, and reduce consumption volatility. However, an important point is that controls on capital outflows positively affected the economic growth of these countries. According to the author's explanation, this kind of control reduced domestic residents' outflow investments, hence raising the financial resources available for domestic investment. Based on these results, the author recommended that these countries in transition adopt a financial regulation in favor of prudential policies to reduce the risk of financial crises and foment economic growth. These prudential policies would be preferable to controls on capital inflows because the latter could cause side effects in the countries that imposed them. According to Rossi (1999, p. 6):

These guidelines specify that a sound regulatory and supervisory framework should reflect: satisfactory capital adequacy requirements and definition of capital; adequate loan classification and provisions; suitable maximum exposure limits; effective enforcement of regulations; clear responsibilities and objectives for each agency involved in banking supervision; strong powers to review and reject specific activities that do not meet the required standards; proper disclosure and accounting requirements; and an adequate system of market incentives to complement regulatory and supervisory requirements.

Regardless of the banking and currency crises that hit emerging economies in the late 1990s and early 2000s, we are unable to claim that the IMF attributed their cause to capital account liberalization processes. As an example of its standpoint, the IMF staff paper Demirguç-Kunt and Detragiache (1998) published aimed to identify the determinants of the banking crises that took place over 1980-1994. Their first regression⁹ pointed out that the main determinants in raising the probability of banking crises were the exogenous shocks that negatively affected economic growth. Besides them, the credit booms that preceded these crises and the existence of explicit insurance instruments also strongly contributed to the occurrence of those financial crises. The latter factor – explicit insurance instruments – was a significant determinant of the banking and currency crises to promote the perverse effect of raising agents' moral hazard.

Given their regression results, they recommended the following to avoid future banking crises: increasing cross-border financial transactions to provide a hedge against exogenous shocks that negatively affect economic activity; adopting a restrictive monetary policy aimed at reducing the inflation rate; implementing implicit insurance instruments, i.e., admitting possible bailouts in cases of future banking crises; and lastly, strengthening of prudential measures (Demirguç-Kunt; Detragiache, 1998).

(9) Demirguç-Kunt and Detragiache (1998) estimated a logit model whose dependent variable included a dummy indicating the occurrence of banking crises. They chose the following independent variables: GDP growth rate; terms of trade index; interest rates; real credit growth rates; inflation rates; domestic currency devaluation; M2/international reserves (an index for the possibility of a sudden stop); fiscal balance/GDP; banking liquidity indices; a dummy indicating explicit insurances; and a proxy for the existence of prudential measures. Their regressions included 45 emerging and developed countries.

With a high degree of similarity in diagnosis and prescriptions about the financial crises of emerging economies, Fisher's (1997)¹⁰ study, representative of the IMF institutional view, highlighted its standpoint at the time. We should mention that the IMF aborted the pressure it had been exercising on developing countries to sign up to the clause of full capital account convertibility because of the negative repercussions of the Asian crisis. The restrictive conditions that the IMF imposed on the access of emerging countries to their loans also started to promote the same negative repercussions. Despite that, in the outbreak of several crises in emerging economies, Fisher (1997) continued to defend the free mobility of capital, justifying it by stating that private capital flows were superior substitutes to IMF loans because its moral hazard would be reduced in a context characterized by a lower share of IMF loans to countries in deficit. To ground full capital account convertibility, the then IMF Director pointed out conventional arguments in favor of the benefits of financial openness, such as increasing domestic investment despite a low rate of domestic saving; economic growth; financial system development; and risk-sharing capacity. According to Fisher (1997, p. 3):

From the viewpoint of international economy, open capital accounts support the multilateral trading system by broadening the channels through which developed and developing countries alike can finance trade and investment and attain higher levels of income. International capital flows have expanded the opportunities for portfolio diversification, and thereby provided investors with a potential to achieve higher risk-adjusted rates of returns. And just as current account liberalization promotes growth by increasing access to sophisticated technology, and export competition has improved domestic technology, so capital account liberalization can increase the efficiency of the domestic financial system.

Following his prescriptions, Fisher (1997) refrained from discarding the potential volatility of private capital inflows. However, according to his standpoint, the volatility of capital flows would configure a response to the adoption of inconsistent macroeconomic policies and the underdevelopment of domestic financial systems. Lastly, the then IMF Director also pointed out that spillover effects would benefit developing economies. The basis for this was, for example, that a currency devaluation promoted by a spillover effect could maintain the relative competitiveness between countries, thus promoting the necessary external adjustments (Fischer, 1997).

2.2 The gradualist approach to capital account liberalization

IMF prescriptions on capital account liberalization slightly changed between the crises of emerging economies and the mid-2000s. The institution started to put more emphasis on the gradual process of capital account liberalization and strongly advise chasing the goal of so-called 'thresholds.' The latter is characterized by the adoption of structural and institutional reforms and consistent macroeconomic policies as prerequisites for a well-succeeded capital account liberalization. Thus, starting from a certain threshold of financial integration, if a country underwent these reforms, it would obtain the benefits described in the theory.

Prasad et al. (2003), an IMF occasional paper, was one of the first studies that focused on searching for evidence on financial globalization to test this theory. It empirically showed a lack of

(10) Stanley Fisher was the IMF Executive-Director when his paper was published.

robust relations among financial integration, an increase in economic growth, and a reduction in consumption volatility. However, despite these results, the authors recommended that emerging countries should increase their financial integration. The logic of this recommendation was precisely that, starting from a certain integration threshold, its effects on economic growth and consumption volatility would be valid according to the orthodox theory. Thus, emerging economies should further develop their capital account liberalization processes to obtain the benefits of financial globalization.

Indeed, the occurrence of so many banking and currency crises in emerging economies changed the IMF advice on full convertibility to capital flows, especially regarding the ideal velocity of such liberalization. Among the controversies during the early 2000s about the potential benefits and risks that capital account liberalization processes posed to emerging economies, Prasad and Rajan's (2005) IMF policy discussion paper stood out. Their proposal adopted a gradual liberalization approach, i.e., a capital account 'controlled' liberalization. More specifically, this proposal consisted of securitizing the dollars deposited in the central bank (due to capital inflows) and the posterior sale of these foreign currencies to closed-end mutual funds. These financial institutions, in turn, should raise funding for these currency purchases by issuing local currency denominated bonds to resident investors and using the purchased dollars for overseas investments.

The authors then denoted this proposal as 'controlled' liberalization because central banks could control the timing and volume of the securitized dollars. Thus, the monetary authority could indirectly manage the capital outflows originating from investments in mutual funds and consequently partly relieve pressures on exchange rate appreciation when facing strong capital inflows. Moreover, their recommendation was that such a proposal should be implemented throughout the process of other structural reforms aimed at developing financial systems so emerging economies could gradually liberalize their capital account until reaching full openness (Prasad; Rajan, 2005).

IMF (2007), published a few months before the outbreak of the GFC, is an excellent example of how the institution, despite recognizing divergences under financial globalization, continued to invoke capital account liberalization and reject the use of capital controls. This particular study aimed to map divergences between several countries regarding the benefits and risks due to financial globalization during the last decades¹¹. An important confirmation was that medium- and low-income countries generally have inferior financial integration and a relatively high (and negative) asset net position in relation to their gross stocks of external assets and liabilities. This evidence implies that high-income countries can take better advantages from risk-sharing mechanisms than other groups of countries. In the face of this evidence, the recommendation in this particular study was that emerging economies should further develop their capital account liberalization to better benefit from these cross-border mechanisms. Given this analysis, IMF (2007) recommended that emerging economies sequence their approach to financial openness. According to this methodology, emerging countries should firstly liberalize long-term and non-debt related capital inflows and only then liberalize short-term and debt-related capital inflows.

(11) IMF (2007) used the methodology elaborated by Lane and Milesi-Ferretti (2007) to evaluate financial integration. It covered the period between 1975 and 2004 and included 91 countries, of which 35 were high-; 42, medium-; and 14, low-income.

Moreover, IMF (2007) estimated some regressions aimed at identifying the relation between the level of financial integration and domestic consumption volatility. Results pointed out that, based on certain levels of financial market development and institutional quality, financial integration could exercise a beneficial pressure on domestic consumption volatility. Therefore, results corroborated the ‘thresholds approach,’ i.e., emerging economies should engage in structural reforms to better benefit from financial globalization. Another preoccupation in that study refers to the connection between the level of financial integration and the occurrence of currency and debt crises and sudden stops. Similar to the case above, the study showed that, from a certain level of financial system development, institutional quality, trade integration, and consistent macroeconomic policies, financial integration and the probability of such crises show a negative relation. However, for emerging economies that had such structural indicators below the thresholds estimated in these regressions, an increase in financial integration would probably lead to sudden stops and currency and debt crises (IMF, 2007).

Despite all these empirical studies showing several flaws in orthodox theory about the benefits of financial globalization, IMF (2007) offered an unfavorable view of capital controls. According to it, the use of capital controls could impose microeconomic costs on countries, such as reduced foreign trade, economic distortions, reduction of competitiveness, incentives to lobbying, greater capital cost for small firms, incentives for fiscal evasion, and administrative costs imposed on the government to maintain a regulatory framework, among others.

We should stress that, during the mid-2000s – characterized by global high liquidity – the IMF was aware of the several deleterious effects that excessive capital inflows could cause to emerging economies, such as exchange rate appreciation and asset inflation. However, despite all this evidence, the multilateral institution it failed to defend the use of capital controls during the period between the crises in emerging economies and the GFC. The economic policy prescriptions the IMF and its economists defended to face strong capital inflow surges were mostly related to fiscal discipline and, to a certain extent, sterilized foreign currency interventions. Cardarelli et al.’s (2009) IMF working paper, which analyzed the occurrence of surges over three cycles of financial inflow waves in 52 countries, represented the scope of this kind of economic policy prescription very well.

These authors estimated regressions to analyze which economic policies a group of economies had adopted more efficiently controlled the deleterious effects due to such surges in the last decades – these undesirable effects stemmed from pressures on exchange rate appreciation, increasing external deficit, and economic recession during sudden stops and reversals. For this, this study considered the following economic policies: non-sterilized foreign exchange interventions, sterilization policies, capital controls, and fiscal policies¹². To identify which economic policies could have had any countercyclical effect facing capital inflow surges, regressions confirmed that, for the analyzed set of countries and cycles, public expenditure showed a pro-cyclical behavior and sterilizations were only efficient during the first year of each cycle, rather than over the whole cycle. Capital controls insignificantly countered pro-cyclical pressures from surges, whereas non-sterilized

(12) Cardarelli et al. (2009) build the following economic policy indices: an index of ‘foreign currency resistance’; an index of sterilization; an index of capital controls, based on Shindler’s (2009) database; and the real growth rate of public primary expenditure. These indices represented, respectively, the central bank’s interventions in foreign currency markets (non-sterilized and sterilized, respectively), capital controls and fiscal policy.

foreign exchange policies only functioned in the first wave of capital inflow surges (Cardarelli et al., 2009).

Considering these results, Cardarelli et al. (2009) recommended that fiscal policies configured the best counter-cyclical policies during periods of capital inflow surges. Thus, decreasing real public primary expenditure when facing inflow surges could reduce interest rates, soften the pressures on exchange rate appreciation (as a great share of public expenditure is directed to non-tradable consumption), and create space for a countercyclical policy during capital inflow bust¹³. It is of particular interest that the study offered no defense in favor of capital controls as a countercyclical policy, especially given regression results. According to Cardarelli et al. (2009, p. 29): *‘Capital controls are no substitute for sound macroeconomic policies including a prudent fiscal stance and a supporting exchange rate and monetary policy framework, as well as appropriate prudential measures.’*

2.3 Some brief considerations

As described in this section, we can summarize the implications found in the main IMF studies about the structural capital controls still in force during the 1980s and the early 1990s as follows:

i) The controls on capital outflows still in force in several developing economies inefficiently ensured the equilibrium of the balance of payments in these economies, as per Johnston and Ryan (1994) and Johnston and Tamirisa (1998). These controls may also have been partially responsible for the occurrence of banking crises in several countries as analyzed by Rossi (1999). Moreover, the structural controls on capital inflows still in force in these economies negatively affected their economic growth;

ii) The structural capital controls still in force in these countries primarily aimed at payment balance management, public sector inflation financing, and financial system regulation. Thus, microprudential regulations should replace these capital controls, as per Johnston and Ryan (1994), Johnston and Tamirisa (1998), and Rossi (1999).

Despite the financial crises that hit emerging economies, we may summarize their implications in the IMF as follows:

i) According to Demirgüç-Kunt and Detragiache (1998) and Rossi (1999), exogenous factors, explicit insurance in banking deposits, and high real interest rates configured the main determinants of the banking and currency crises that hit several emerging economies between the 1980s and early 2000s;

ii) After these crises, IMF papers continued to defend capital account liberalization. However, they emphasized the financial openness sequencing methodology and the threshold approach, also recommending countercyclical fiscal policies as an efficient tool to face strong

(13) According to Cardarelli et al. (2009), public revenue generally increases over a cycle of capital inflow surge, which in turn induces an increase of public expenditure. Therefore, the authors' recommendation was to counter this expenditure increase over the cycle.

capital inflows. We find the scope of this prescription in Fisher (1997), Prasad et al. (2003), Prasad and Rajan (2005), IMF (2007), and Cardarelli et al. (2009).

Although these studies represented an important change in the IMF approach to capital account liberalization, we could observe some blind spots in some of these publications which, according to our view, they failed to properly address. Perhaps the biggest of them refers to an unclear definition regarding their threshold approach, i.e., from exactly which level of financial integration each emerging economy would reap the benefits of financial globalization. For instance, the estimates in Prasad et al. (2003) and IMF (2007) claim that from about 50% of financial integration – following the methodology present in Lane and Milesi-Ferretti (2003; 2007) –, the effects of capital account liberalization on economic growth and consumption volatility would be those defended by orthodoxy theory. However, we understand that such thesis resisting full testing given that the empirical investigation these studies conducted established that only developed economies showed such level of financial integration at the time. Moreover, if we consider that industrialized countries generally constituted large amounts of foreign assets and liabilities up to the period they fully opened their capital accounts, the aforementioned causality between capital account liberalization, financial integration, and the claimed benefits of financial globalization gets even weaker.

Another point we could find by jointly analyzing these studies refers to the absence of a stronger standpoint favoring the use of capital controls by emerging economies. We understand that such absence includes most studies given the relative scarcity of experiences involving the sporadic use of capital controls by emerging countries within the considered period, which, in turn, was characterized by a movement of capital inflow and outflow liberalization by a great portion of emerging economies. Indeed, this process may have influenced Cardarelli et al. (2009)'s regression results, which established how inefficiently ongoing capital controls achieved the goals of these economies in the considered period. Put differently, a better understanding of the benefits and dilemmas regarding the use of capital controls was only possible after a thorough investigation of several experiences during the post-global financial crisis period.

3 The post-global financial crisis approach

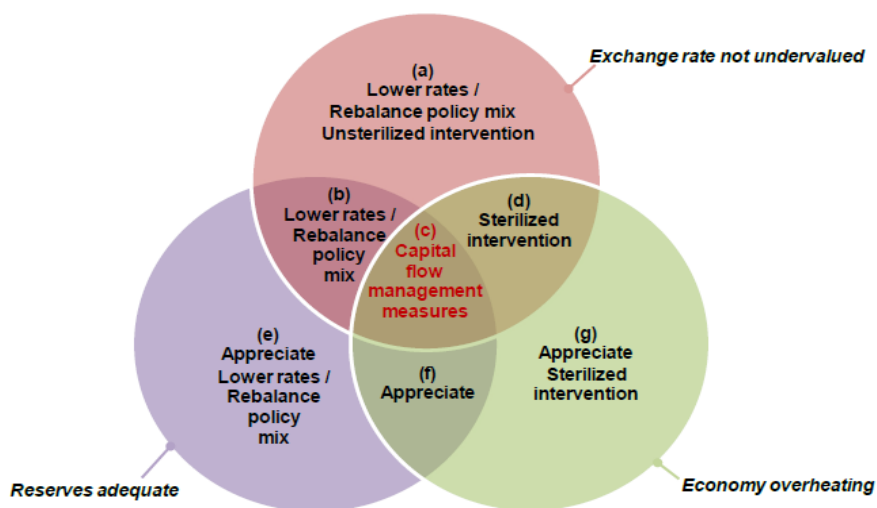
The conservative approach to capital account liberalization prescriptions which marked the IMF view after the crises in emerging economies significantly changed after the 2008 GFC. In the post-global financial crisis period, several IMF papers began to partially defend the capital controls from several emerging economies. Moreover, a larger number of official publications representing the view of the institution favored a stronger regulation apparatus among emerging and developed countries since the global financial crisis outbreak¹⁴.

IMF (2011a) is possibly the first study to show this change in standpoint. According to its institutional view, the use of capital controls and macroprudential policies – capital flow management measures (CFMs) – is only justified after the following scenarios (given strong capital inflows): i)

(14) Before proceeding, a caveat is worth noting. In general, the literature has adopted a typology that classifies capital controls as discriminating regulation instruments based on investors' residency. By contrast, macroprudential policies only discriminate based on the currency denomination of the cross-border financial transactions. The term the IMF and the literature in general have used, 'Capital Flows Management Measures' (CFMs), encompasses these two types of regulations, i.e., capital controls and macroprudential policies.

when exchange rate appreciation has exceeded its equilibrium level; ii) when the accumulation of international reserves has reached its superior limit; and iii) when the implementation of contractionary fiscal policy and expansionist monetary policy has undergone exhaustion, following product gap estimations concerning interest rates and inflation. This set of prerequisites to implement CFMs has been synthesized in a Venn diagram, such as that in Figure 1¹⁵.

Figure 1
Context and prerequisites the International Monetary Fund demanded for economies to accept sporadic capital flows management measures



Valued exchange rate
 (a) Lower rates/Rebalance policy mix with unsterilized intervention; (b) Lower rates/Rebalance policy mix; (e) Lower rate appreciation/Rebalance policy mix; (f) Appreciation; (g) Sterilized appreciation;
 Adequate reserves; Overheating.
 Source: IMF (2011a).

Therefore, the standpoint in IMF (2011a) justified the sporadic use of CFMs only after economies met all these criteria. Countries should impose CFMs as long as the capital inflows persisted so emerging countries should prioritize macroprudential policies, i.e., regulation measures that discriminate based on the currency denomination of cross-border transactions. Only after exhausting macroprudential policies, should they impose sporadic capital controls, i.e., regulation measures that discriminate based on investors' residency. Note that that study recognized that strong capital inflows to emerging economies in the post-crisis period provoked exchange rate misalignments in relation to their domestic fundamentals. These capital inflows also greatly expanded domestic credit, contributing to rising inflationary pressures. Addressing this effect, IMF (2011a)

(15) IMF (2011a) used the following criteria: regarding the possibility of exchange rate overvaluation, its methodology analyzes deviations based on its long-term trend; regarding inflationary pressures, it evaluates both product gap and deviations based on the Inflation Targeting Regime. Lastly, referring to the adequate level of international reserves, the methodology considers the sum of external short-term liabilities and current account deficits. An excess of international reserves occurs if the ratio of international reserves to this sum exceeds 100%.

pointed out that the relative loss of monetary policy autonomy since a contractionary monetary policy under this context aiming to counter inflationary pressures could attract even more capital inflows¹⁶. Resorting to a sterilized foreign exchange mechanism is also problematic because this particular economic policy shows high quasi-fiscal costs for emerging economies.

Regarding the broader concept of CFMs, IMF (2011a) attributed great importance to macroprudential policies because these regulation instruments can raise the capacity for capital inflow absorption and relieve pressure on exchange rate appreciation. Moreover, it pointed out the importance of regulatory measures that support secondary bond market development. Thus, in an effort to hierarchize CFMs to be implemented, the IMF recommended that economies prioritize macroprudential policies and domestic financial regulation measures. In case these regulation measures failed to have the desired effect, emerging countries could impose macroprudential policies that indirectly influence derivative markets. Therefore, these economies should only use capital controls as a last resort because this kind of CFM usually promotes spillover effects between emerging countries. In other words, a country that has a regulatory framework capable of imposing capital controls induces capital flows toward emerging economies showing no administrative capacities to impose capital controls. Note that the multilateral aspect of CFMs is one of the main concerns in IMF (2011a).

The view expressed in IMF (2011a) also criticized the adoption of capital controls aimed at maintaining a fixed exchange rate parity or a crawling-peg exchange rate system because this kind of policy could stimulate one-way speculation bets. This institutional study also supported the hypothesis that extensive use of capital controls could induce investors to evade these regulation measures using financial innovations. Thus, emerging economies should only impose capital controls when capital inflows lack intermediation by a banking system and brought considerable risk to financial markets. Otherwise, the study deemed macroprudential policies as more efficient managers of these financial risks. Lastly, note that IMF (2011a) pointed out that the use of capital controls could cause domestic financial system underdevelopment as some of its segments could depend on foreign capital flows for their development.

The global financial crisis has evinced the risk inherent in financial non-banking institutions (what is known as shadow banking system), whose institutionality had been largely underestimated by monetary authorities until then. The recognition of such risks and the prescriptions of new regulation policies began then to integrate the IMF rhetoric. Representing a slight advance in its recommendations about capital controls, IMF (2011b), representative of the view of the institution, pointed out the need for broader financial regulation, especially due to cross-border transactions by the shadow banking system, which basically consists of financial institutions that fail to take deposits. Hence, these non-banking financial institutions (also called 'nonbank banks') currently lie outside most traditional financial regulations¹⁷. Moreover, to contribute to the multilateral aspect of capital controls and macroprudential policies, the regressions in (2011b) found spillover effects due to the

(16) According to one of its estimates, interest rates exceeded inflation ones in previous periods, which resemble those in 2009-2010. In other words, in this new context of strong capital inflows, several emerging economies responded by reducing their interest rates despite inflationary pressures.

(17) The shadow banking system primarily consists of non-banking financial institutions which raise funds in capital markets. These institutions, therefore, evade most traditional banking regulations. See IMF (2011b).

CFMs in four of the analyzed emerging economies. According to this institutional study, recent changes to international financial regulation, despite advances in several of its aspects, remain insufficient to deal with the international coordination of capital controls (IMF, 2011b).

As the plurality of risks inherent in unrestricted capital flows became ever more evident, the concerns about financial regulation got broader. The IMF staff note published by Ostry et al. (2010) showed additional changes in IMF prescriptions about capital controls. That study highlighted the financial risks that capital inflows can cause to economies, such as asset inflation, currency and maturity mismatches, and a strong credit expansion, i.e., concerns about capital inflows went beyond the pressures on exchange rate appreciation, indicating that the CFMs could also mitigate these risks. However, the authors disapproved the permanent use of capital controls as they could cause global imbalances. According to Ostry et al. (2010), only the use of sporadic CFMs would be congruent with the multilateral concerns involving international financial regulation¹⁸.

That study explicitly recommended capital controls stretching external liability maturity to avoid controls evasion as these particular capital controls could also align the real exchange rate to its long-term equilibrium level. That study explicitly favored prudential CFMs, i.e., regulation measures that refrain from discriminating investors' residency. However, Ostry et al. (2010) pointed out that an excess of macroprudential policies could lead to their evasion by the shadow banking system. Thus, that study defended complementary CFMs, i.e., a joint action between those that discriminate investor's residency (capital controls) and those that do so based on the currency denomination of cross-border transactions (macroprudential policies). To avoid maximum regulation evasion, economies should especially impose CFMs on debt bonds and financial foreign direct investment. Another advantage is that CFMs could also raise the retention of domestic financial resources to be used in domestic investment funding (Ostry et al., 2010). Note that this recommendation and its implicit defense of CFMs on capital outflows directly contrasted with that prevailing during capital account liberalization processes in emerging economies during the 1990s. The latter prescribed the defense of full financial openness to attract foreign savings to fund domestic investment.

The IMF staff note published by Ostry et al. (2011) also showed this evolution in new goals for capital controls. The authors confirmed the concerns related to the economy described in IMF (2011a) and financial motivations. Although, when focusing on the latter, CFMs could more persistently aim at specific asset/debt classes, cases which could also admit administrative measures. On the one hand, regarding macroeconomic concerns, in which capital inflow surges overheat economic activity and overvalue exchange rates, the goal of CFMs would primarily consist of reducing the net volume of capital flows. On the other hand, when focusing on financial stability matters – whose main concerns are asset inflation, strong credit expansion, and agents' balance sheet misalignments (such as currency and maturity mismatches) –, CFM goals should especially aim to

(18) Ostry et al. (2010) made a parallel between permanent capital controls with the accumulation of international reserves as generators of global imbalances. The authors also pointed out the importance of inflow control coordination between emerging economies as a strategy to avoid spillover effects. However, the authors failed to indicate what role advanced capital-source countries would play in this coordination. Ostry et al. (2012) raised this question afterward.

stretch capital inflow maturity and change the currency denomination of liabilities (Ostry et al., 2011)¹⁹.

On the goal of countering financial risks, that study also defended imposing macroprudential CFMs to counter a high exposition of the domestic banking system in foreign currency markets. Moreover, economies should impose the use of capital controls on non-banking financial institutions and non-financial institutions showing an external vulnerability level. The authors also defended combining these CFMs to avoid the evasion by foreign investors. According to them, regulation evasions are common in emerging economies with a high level of financial openness and deepening liquid derivative markets (Ostry et al., 2011).

During this period, marked by a new IMF rhetoric, the defense of capital controls on outflows in IMF (2012a) configured one of the most important shifts in the its views on the subject. According to this particular study, in the case of an imminent financial crisis (or as crisis management), sporadic CFMs on capital outflows would be justifiable as an instrument to avoid abrupt currency devaluations and significant reductions of international reserves. Moreover, these regulatory measures could also provide additional timing for the implementation of consistent macroeconomic policies and prudential measures (IMF, 2012a)²⁰.

In line with the defense of CFMs on capital inflows om IMF (2011a), IMF (2012a) held that, in cases of external shocks that lead to expressive outflows, countries should primarily: i) allow currency devaluation until its real equilibrium level; ii) implement a contractionary monetary policy and an expansive fiscal policy following product gap estimations concerning interest and inflation rates; and iii) sell international reserves up to an adequate level. These options exhausted, economies could temporarily impose CFMs on outflows to stabilize financial and exchange rates and restore international reserves²¹. The institution also pointed out that countries should always pay attention to the equilibrium between their external assets and liabilities, including as a form to guarantee the effectiveness of CFMs on capital outflows (IMF, 2012a). This new standpoint is even more relevant from a historical perspective if we remind ourselves of the disapproval the IMF manifested about the controls on capital outflows Malaysia imposed in 1998 as a protection against speculative attacks and the capital flight that characterized the outbreak of the Asian crisis.

IMF (2012b), also representative of the view of the institution, brought some important advances regarding capital controls, despite reaffirming a certain conservatism about this subject. That study defended gradual capital account liberalization combined with the threshold approach as these measures aimed to give impetus to domestic capital market development, highlighting them among the reforms that should take place before a greater degree of financial openness. According to

(19) To theoretically ground their point of view, Ostry et al. (2011) used the concept that capital controls would reduce a negative externality due to excessive external fund-raising contracted by non-financial companies, as per Korinek (2011). Note that although Ostry et al. (2011) are right in highlighting the currency mismatches due to the denomination of cross-border transactions in a few strong currencies, the authors were unclear about how the use of CFMs could change this condition, which is one of the main pillars of the international political economy of financial globalization.

(20) One of the main recommendations in IMF (2012a) is that countries must show consistent fiscal and foreign exchange policies. Otherwise, CFMs on capital outflows will probably be ineffective.

(21) Note that IMF (2012a) prioritized the use of macroprudential policies in such a scenario. However, the institution failed to exclude the possibility of using capital controls, i.e., CFMs that discriminate based on investors' residency as a last resort.

the authors, these reforms could raise the capacity of capital inflow absorption of an economy and, therefore, promote a higher degree of exchange rate stability. Note that, contrary to IMF (2011a), which explained its concern on exchange rate appreciation risks, IMF (2012b) claimed more intensively that CFMs could mitigate financial risks. Additionally, IMF (2012b) defended the imposition of CFMs as a way to support the implementation of structural reforms and consistent macroeconomic policies. It differs, however, from the view in IMF (2011a), which advocated the use of CFMs only after the exhaustion of alternative economic policies.

Despite this important advance, the institution condemned the permanent imposition of capital controls as, according to that study, this kind of financial regulation could incentivize evasion in financial institutions, among other deleterious effects. Following IMF (2012b, p. 10):

They can reduce discipline in financial markets and public finances, tighten financing constraints by restricting the availability of foreign capital, and limit residents' options for diversifying their assets. They can also be costly to monitor and enforce, promote rent-seeking behavior and corruption, and facilitate repression of the financial sector, impeding financial development and distorting the allocation of capital.

Regarding the international coordination of financial regulation, IMF (2012b) offered another important advance by explicitly recommending a higher degree of regulation on systematically important financial institutions (which include the shadow banking system), especially on those based on capital-source countries. It also appealed these developed countries to internalize their monetary policy effects as they had been one of the main determinants of cross-border capital flows²².

The post-global financial crisis also questioned the role the IMF should play in the international economy. This institution saw its functions decreasing since the liberalizing reforms when private capital flows began again to assume an increasingly leading role. A few years after the global financial crisis deflagration, amid the use of capital controls by several emerging economies, the IMF role renewed its role as a more active coordinator of global finance. The IMF staff discussion note authored by Ostry and Ghosh (2013) showed an important contribution toward this. This particular study, influenced by orthodox models on the international coordination of capital controls, pointed out that several economic policies show the side effect of inducing negative externalities on other countries. In the face of this, the authors offered an advisory proposal for the IMF to coordinate trade-offs between countries to internalize the effects due to economic policies, even if this coordination promotes an internal cost to advanced economies (Ostry; Ghosh, 2013)²³. More specifically, this study pointed out the rising intensity of what is known as 'multiplier transmissions,' highlighting the effects of the monetary policies of advanced economies on capital inflows directed to emerging ones. The authors then proposed the direct coordination on foreign loans since the unilateral imposition of capital controls by emerging recipient countries shows a 'convex cost' in

(22) According to the view in IMF (2012b), a greater degree of macroprudential regulation on the financial institutions of capital-source countries would reduce capital outflows due to changes in interest rates in these developed countries, thus causing a greater degree of internalization of monetary policy effects.

(23) Modeling their analysis, Ostry and Ghosh (2013) proposed that coordinating these trade-off would create an efficient Pareto point on a global level.

domestic agents' utility function, as per Ostry et al. (2012) and Korinek (2012). Following Ostry and Ghosh (2013, p. 26):

In the capital flows context, source countries might be expected to take measures to raise the cost, and thereby reduce the quantity, of risky carry trade lending, just as recipient countries would be expected to adopt prudential policies and in some circumstances capital inflow controls to reduce the risk of harmful boom-bust cycles.

The different approaches and timing emerging economies showed as they imposed capital controls during the post-global financial crisis period influenced the IMF view on maintaining the extension of these regulatory measures. IMF (2013a), representative of its official view, was an important advance toward this. Firstly, that study reaffirmed some positions in previous studies, such as the rejection of capital controls aimed at promoting currency devaluation, as this kind of measure could distort the international financial system. It also reaffirmed the Venn diagram, as in IMF (2011a), in such a way that these regulation measures should be lifted as soon as the capital inflow surge ceased. However, the view of that study also defended maintaining CFMs until the end of structural reforms, guaranteeing the implementation of 'thresholds' (IMF, 2013a). Thus, even though the surge of capital inflows might cease, emerging economies can legitimately maintain CFMs in concurrence with reforms aiming to develop domestic capital markets, especially the institutional investors one. Following IMF (2013a, p. 16):

Certain CFMs, including residency- or nationality-based measures, may be maintained over the longer term provided that they are imposed for reasons other than BOP purposes (such as financial stability or national security reasons) and, therefore, could not substitute for warranted macroeconomic adjustment and that no less discriminatory measure is available that is effective. As noted [...], if the surge reveals that liberalization has outpaced the capacity of the economy to safely handle the resulting flows, reforms to improve institutional and financial development may need to be implemented before CFMs can safely be lifted.

IMF (2013a) also pointed out the importance of international coordination processes among countries configuring sources and recipients of capital. About the former, mostly consisting of developed countries, the institution emphasized the need for stronger prudential policies and a higher degree of internalization in their monetary policy effects as both could reduce the spillover effects on emerging economies. Lastly, IMF (2013a) restated emerging economies should use CFMs on capital outflows in case of an imminent financial crisis to support the necessary structural reforms and macroeconomic adjustments, as in IMF (2012a). However, this study furthered this particular recommendation as its authors defended that, in the context above, CFMs on capital outflows must include more financial transaction modalities than those on capital inflows. This broader range of CFMs on capital outflows is justified by the need to better avoid the deleterious effects of capital flight. While on the subject, these regulatory measures could also aim to repatriate foreign agents' invested resources (IMF, 2013a).

During this period, in which the IMF rethought the desirability of capital controls, other issues were raised within its scope toward global finance. One, which has always been deeply neglected, is the relation between the free mobility of capital and income distribution in countries engaging in the global private finance circuit. Ostry et al.'s (2016) study, representing the official IMF view, is one of the best examples of this process. Firstly, the authors explicitly recognize that controls should

target short-term debt inflows. An important critique they raised precisely relates to the absence of studies over the last three decades that analyze the relation between capital account liberalization and income inequality. According to that study, capital account liberalization relate to an increase in income inequality, even in the absence of financial crises. When capital inflow surges provoke future currency and/or banking crises, the rise in income inequality is more intense and lasting (Ostry et al., 2016)²⁴. Besides criticizing the scarcity of studies on the aforementioned relation, the IMF still supported that, as financial markets generally impose austerity on emerging economies during financial crises, the combination between capital account liberalization and fiscal consolidation in these cases increases income inequality. Lastly, Ostry et al. (2016) pointed out that recent empirical literature has been pointing to a negative relation between income inequality and economic growth in such a way that several capital account liberalization processes could possibly have negatively contributed to the level and sustainability of economic growth in emerging countries.

3.1 Some brief considerations

As described in this Section, we may summarized the main considerations on capital controls in IMF studies after the 2007-2008 GFC as follows:

i) Studies offered recommendations regarding the sporadic use of capital controls and macroprudential policies to counter pressures on exchange rate appreciation and financial risks, as per IMF (2011a), Ostry et al. (2010), and Ostry et al. (2011);

ii) IMF (2011b) and IMF (2012a; 2012b) showed important advances in their prescriptions on the subject. These studies offered recommendations for greater regulation on the shadow banking system and sporadic controls on capital outflows in the case of imminent financial crises, respectively;

iii) Ostry and Ghosh (2013) proposed that the IMF operates as an international adviser of trade-offs between countries, including as an adviser to regulate capital flows coming from advanced economies, constituting a great advance in the rhetoric of the institution;

iv) Another important advance in IMF prescriptions came in IMF (2013a), in which it defended emerging economies using CFMs until they completed their structural reforms, rather than only while capital inflow surges persists. The institution also defended a greater degree of financial regulation on economies which are sources of advanced capital to reduce spillover to emerging countries;

v) Lastly, Ostry et al. (2016) represented an important advance in identifying the existing relation between capital account liberalization and the rise of income inequality, a constantly underestimated subject in IMF studies.

(24) This relation was based on Furceri and Loungani (2015), who also co-authored Ostry et al. (2016). Furceri and Loungani's (2015) econometric study considered 224 capital account liberalization processes in 194 countries (including both developed and developing economies) between 1970-2010. According to the authors' regressions, capital account liberalization implied a 1-percentage point increase in the Gini coefficient. In scenarios characterized by financial crises due to liberalization processes, Gini coefficients increased by 2-percentage points until two years after the crisis and by approximately 3.5-percentage points until five years after the crisis.

Given these results and recommendations, we observe how some of the mentioned prescriptions different from those that characterized the standpoint of the institution during the first period considered in our study. For instance, facing so many banking crises between 1980 and 1994, the main recommendations in Demirguç-Kunt and Detragiache (1998) include i) increasing cross-border financial transactions; ii) adopting a restrictive monetary policy; and iii) admitting possible bailouts in cases of future banking crises. They significantly diverge from the prescriptions IMF suggested after the 2007-2008 GFC, of which the following stand out: capital controls and macroprudential policies (CFMs) to reduce capital inflows, as per IMF (2011a); the recognition that price stability, although necessary, is insufficient to eliminate macroeconomic instability, as per Blanchard et al. (2010); and the consensus about the systemic risks stemming from a regulatory framework that enable the formation of ‘too big to fail’ financial institutions.

Another example of such divergence between these two periods includes evaluating spillover effects in emerging economies due to capital flows. For instance, while Fischer (1997) attributed a beneficial role to such phenomenon – given that currency devaluation would supposedly restore external competitiveness – the new standpoint of the institution has included a critical perspective on this subject. Indeed, we found recent recommendations for a greater degree of regulation on both capital-recipient and capital-source economies aimed at mitigating some of the deleterious impacts provoked by spillover over the post-global financial crisis period, such as per IMF (2011a; 2011b; 2012a; 2012b; 2013a). Consequently, we can conclude that how the institution evaluates this phenomenon has increasingly included a negative perception, especially because spillover effects can also promote exchange rate appreciation and financial risks.

Chart 1 below aims to synthesize the main arguments in each study which was carefully analyzed by this study. As mentioned, we can observe that, along the period after the GFC, most papers falls under the ‘Institutional View’ (IV) and ‘Staff Discussion Note’ (SN) categories, thus configuring a scenario quite different from the one observed in the first period we evaluated, in which most papers analyzed fall under the ‘Working Study (WP) and/or ‘Policy Discussion Study (PDP) categories. While the first two categories include the official view of the institution (especially the first one), we are unable to claim the same for the last two ones.

Chart 1
A summary of the main arguments in the main IMF studies

Studies	Main implications and/or recommendations	Covered country groups and period	Approach	Publication category	
				WP/PDP	IV/SN
Johnston and Ryan (1994)	Full capital account liberalization to restore BOP equilibrium; adoption of domestic microprudential regulation	Emerging and developed economies (1985-1992)	Econometric	X	
Johnston and Tamirisa (1998)	Similar to those in Johnston and Ryan (1994)	Emerging economies (1993-1996)	Econometric	X	
Rossi (1999)	Full capital account liberalization to reduce financial risks; adoption of domestic microprudential regulation	Emerging economies (1990-1997)	Econometric	X	

To be continued...

Chart 1 – Continuation

Studies	Main implications and/or recommendations	Covered country groups and period	Approach	Publication category	
Demirguç-Kunt and Detragiache (1998)	Full capital account liberalization to reduce real interest rates and hence financial risks	Emerging and developed economies (1980-1994)	Econometric		X
Fischer (1997)	Full capital account liberalization; adoption of flexible exchange rates	Emerging economies	Theoretical/ Normative		X
Prasad et al. (2003)	Sequential capital account liberalization; threshold approach	Emerging and developed economies (1960-1999)	Empiric (Descriptive)	X	
Prasad and Rajan (2005)	Sequential capital account liberalization; central bank as ‘exchange rate market maker’	Emerging economies	Theoretical/ Normative	X	
IMF (2007)	Sequential capital account liberalization; threshold approach	Emerging and developed economies (1975-2004)	Empiric (Descriptive)		X
Cardarelli et al. (2009)	Threshold approach; countercyclical fiscal policy as ‘first-best exchange rate policy’	Emerging and developed economies (1987-2007)	Econometric	X	
IMF (2011a)	Sporadic CFMs on capital inflows after the exhaustion of ‘conventional’ policies	Emerging economies (1990-2010)	Econometric		X
IMF (2011b)	Greater regulation on capital flows intermediated by the shadow banking system	Emerging economies (1980-2009)	Econometric		X
Ostry et al. (2010)	Sporadic CFMs on external funding of financial institutions; concerns with exchange rate appreciation and financial risks	Emerging economies (2003-2009)	Econometric		X
Ostry et al. (2011)	Similar to those in Ostry et al. (2010)	Emerging economies (1995-2008)	Econometric		X
IMF (2012a)	Sporadic CFMs on capital outflows in the imminence of currency crises	Emerging economies	Empiric (Descriptive)		X
IMF (2012b)	Similar to those in IMF (2012a)	Emerging and developed economies	Empiric (Descriptive)		X
Ostry and Ghosh (2013)	Regulation on capital outflows from advanced economies	Emerging and developed economies	Theoretical modeling		X
IMF (2013a)	Use of CFMs until market reforms are complete; regulation of capital outflows from capital-source economies	Emerging and developed economies	Theoretical/ Normative		X
Ostry et al. (2016)	Existing relation between capital account liberalization and increased income inequality	Emerging and developed economies (1970-2010)	Empiric (Descriptive)/ Literature Review		X

Source: Authors’ elaboration.

Finally, we also point out that this ongoing reorientation on capital account liberalization and capital controls plays an important role in the political economy of financial globalization, especially if we consider the increasing number of institutional publications that endorse the use of capital flows regulation. A remaining question includes whether such reorientation will influence the official standpoint of other multilateral institutions – such as OECD, for example – and influential private organizations, such as major rating agencies.

4 Conclusions

As described in this study, we can subdivide the changes in IMF prescriptions on capital account liberalization and capital controls into two steps: the first took place when developing economies were engaging in capital account liberalization processes until the 2007-2008 GFC. The second step, in turn, has persisted since the outbreak of the GFC.

Therefore, the critical review performed in this study put in evidence the discontinuities in the scope of IMF studies on the subject over the last two and a half decades. The evidence we presented shows that the GFC, the biggest financial crisis in the last 80 years which even impacted developed countries, promoted a stronger reorientation in IMF prescriptions than those which followed the crises of emerging economies. Indeed, its defense of capital controls only gained impetus after the GFC.

Note the increase in the number of studies representing the institutional view of the IMF after the massive crisis of 2007-2008. The presented evidence suggests that the imposition of capital controls by emerging countries facing the strong capital inflows during the post-global financial crisis period also forced IMF to review its position on the subject. Its traditional rhetoric became unsustainable in the face of the GFC and its aftermath.

Moreover, we can consider the evolution in IMF studies and prescriptions on capital account liberalization and capital controls as its response to empirical studies that pointed to flaws in the orthodox presumptions about the supposed benefits of the free mobility of capital as well as to empirical studies that investigated the effectiveness of capital controls emerging economies set during the post-global financial crisis period²⁵. Finally, new orthodox models that ground the use of capital controls may also be influencing the new IMF standpoint on the subject²⁶.

However, the IMF has also been showing relative conservatism toward capital controls. For instance, until the drafting of this study, no IMF article defended the permanent use of capital controls or the use of capital controls to promote domestic currency devaluation. According to its view, both goals would provoke global imbalances, despite some empirical evidence that has already pointed to

(25) On the effectiveness of capital controls and macroprudential policies, see Habermeier et al. (2011), Pasricha et al. (2018), and Forbes et al. (2016). Fernández et al. (2016) and Klein (2012) perform comparative analyses among economies that impose permanent capital controls vis-à-vis those that use them sporadically. Aizenman and Binici (2016), Binici et al. (2010), and Ghosh, Qureshi, and Sugawara (2014) have evaluated the relative effectiveness of macroprudential policies developed economies imposed vis-à-vis the capital controls in emerging countries.

(26) For orthodox models grounding the use of capital controls, see Korinek (2011), Ostry et al. (2012), Magud et al. (2011), and Blanchard et al. (2017). Korinek (2012) and Ostry et al. (2012) developed models that support the international coordination of CFMs.

the superiority (under some pre-requisites) of permanent capital controls vis-à-vis sporadic capital controls²⁷. It is, therefore, a point that the institution has failed to promote.

In other words, on the one hand, the evidence in this study seems to show that the IMF prescriptions on macroprudential policies and especially on capital controls showed important advances regarding concerns about financial risks and macroeconomic distortions, such as pressures on exchange rate appreciation due to capital inflows surges. On the other hand, however, by rejecting the permanent use of capital controls aimed at devaluing domestic currencies, the IMF still fails to incorporate some of the concerns from emerging economies about economic development as the aforementioned capital controls have already shown great importance in the development strategies of some emerging countries²⁸.

Therefore, we also conclude that while the ongoing reorientation of the IMF on the use of capital controls may certainly be considered opportune, it is still far from what the Keynesian-Structuralist approach in our Introduction could consider ideal. Indeed, the currency hierarchy that prevails in contemporary IMFS is a permanent structure – i.e., the ability of a given currency to denominate financial instruments in international markets configures the result of long and political processes that characterize each prevailing international monetary system. Consequently, the sporadic use of capital controls is unable to offset all side effects derived from the international mobility of capital flows. Furthermore, the aforementioned approach widely recognizes that such asymmetric structure can also reinforce the structural current account deficits in peripheral economies given the successive remittance of foreign income, an expected outcome of large amounts of external funding which were previously contracted at lower interest rates. We may claim that such dynamics potentially increase the external dependence of peripheral economies, which certainly may affect its economic growth and development objectives. Therefore, the permanent use of capital controls should also be geared toward these concerns, rather than not only at mitigating financial risks and macroeconomic distortions. However, the official IMF standpoint is yet to incorporate this approach.

References

- AIZENMAN, J.; BINICI, M. Exchange market pressure in OECD and emerging economies: domestic vs. external factors and capital flows in the old and new normal. *Journal of International Money and Finance*, v. 66, p. 65-87, 2016.
- ANDRADE, R. P.; PRATES, D. M. Exchange rate dynamics in a peripheral monetary economy. *Journal of Post Keynesian Economics*, v. 35, n. 3, p. 399-416, 2013.
- ARORA, V. B.; CERISOLA, M. D. *How does US monetary policy influence economic conditions in emerging markets?* Washington, DC: International Monetary Fund, 2000. (IMF Working Paper, WP/00/148).

(27) On the superiority of permanent capital controls vis-à-vis sporadic ones, see Klein (2012) and Fernández et al. (2016). From our standpoint, permanent capital controls fail to incur into financial repression, referring, rather, to constantly imposed controls. For instance, a small constant tax on short-term debt inflows over a long period could configured a permanent capital control. The capital control database in Fernández et al. (2016) is indispensable to understanding this categorization.

(28) See Klein (2012) for the influence of capital controls on the economic growth of China.

- BINICI, M.; HUTCHISON, M.; SCHINDLER, M. Controlling capital? Legal restrictions and the asset composition of international financial flows. *Journal of International Money and Finance*, v. 29, n. 4, p. 666-684, 2010.
- BLANCHARD, O.; DELL'ARICCIA, G.; MAURO, P. Rethinking macroeconomic policy. *Journal of Money, Credit and Banking*, v. 42, p. 199-215, 2010.
- BLANCHARD, O.; OSTRY, J. D.; GHOSH, A. R.; CHAMON, M. Are capital inflows expansionary or contractionary? Theory, policy implications, and some evidence. *IMF Economic Review*, v. 65, n. 3, p. 563-585, 2017.
- BLUEDORN, J.; DUTTAGUPTA, R.; GUAJARDO, J.; TOPALOVA, P. *Capital flows are fickle: Anytime, anywhere*. Washington, DC: International Monetary Fund, 2013. (IMF Working Paper, WP/13/183).
- CALVO, G. A.; IZQUIERDO, A.; MEJIA, L. F. *On the empirics of sudden stops: the relevance of balance-sheet effects*. Cambridge, MA: National Bureau of Economic Research, 2004. (NBER Working Paper, n. w10520).
- CALVO, G. A.; REINHART, C. M. Fear of floating. *The Quarterly Journal of Economics*, v. 117, n. 2, p. 379-408, 2002.
- CALDERÓN, C.; LEVY-YEYATI, E. *Zooming in: From aggregate volatility to income distribution*. Washington, DC: The World Bank, 2009. (World Bank Working Paper, WPS4895).
- CARDARELLI, R.; ELEKDAG, S.; KOSE, M. A. *Capital inflows: Macroeconomic implications and policy responses*. Washington, DC: International Monetary Fund, 2009. (IMF Working Paper, WP/09/40).
- CONTI, B. M. D.; PRATES, D. M.; PLIHON, D. A hierarquia monetária e suas implicações para as taxas de câmbio e de juros e a política econômica dos países periféricos. *Economia e Sociedade*, Campinas, v. 23, n. 2, p. 341-372, 2014.
- DEMIRGÜÇ-KUNT, A.; DETRAGIACHE, E. The determinants of banking crises in developing and developed countries. *IMF Staff Papers*, v. 45, n. 1, p. 81-109, 1998.
- EDWARDS, S. Capital controls, sudden stops, and current account reversals. In: EDWARDS, S. (Ed.). *Capital controls and capital flows in emerging economies: policies, practices and consequences*. Chicago, IL: University of Chicago Press, 2007. p. 73-113.
- EICHENGREEN, B.; HAUSMANN, R. Currency mismatches, debt intolerance and original sin: why they are not the same and why it matters. In: EDWARDS, S. (Ed.). *Capital controls and capital flows in emerging economies: policies, practices and consequences*. Chicago, IL: University of Chicago Press, 2007. p. 121-164.
- EICHENGREEN, B.; HAUSMANN, R.; PANIZZA, U. The pain of original sin. In: EICHENGREEN, B.; HAUSMANN, R. (Ed.). *Other people's money: debt denomination and financial instability in emerging-market economies*. Chicago, IL: University of Chicago Press, 2003. p. 13-61.

FERNÁNDEZ, A.; KLEIN, M. W.; REBUCCI, A.; SCHINDLER, M.; URIBE, M. Capital control measures: a new dataset. *IMF Economic Review*, v. 64, n. 3, p. 548-574, 2016.

FISCHER, S. Capital account liberalization and the role of the IMF. In: IMF Seminar Asia and the IMF, Hong Kong, v. 19, 1997.

FORBES, K.; FRATZSCHER, M.; KOSTKA, T.; STRAUB, R. Bubble thy neighbor: portfolio effects and externalities from capital controls. *Journal of International Economics*, v. 99, p. 85-104, 2016.

FRITZ, B.; de PAULA, L. F.; PRATES, D. M. Global currency hierarchy and national policy space: a framework for peripheral economies. *European Journal of Economics and Economic Policies: Intervention*, v. 15, n. 2, p. 208-218, 2018.

FRITZ, B.; PRATES, D. The new IMF approach to capital account management and its blind spots: lessons from Brazil and South Korea. *International Review of Applied Economics*, v. 28, n. 2, p. 210-239, 2014.

FURCERI, D.; LOUNGANI, P. *Capital account liberalization and inequality*. Washington, DC: International Monetary Fund, 2015. (IMF Working Paper, WP/15/243).

GHOSH, M. A. R.; QURESHI, M. S.; SUGAWARA, N. *Regulating capital flows at both ends: does it work?* Washington, DC: International Monetary Fund, 2014. (IMF Working Paper, WP/14/188).

HABERMEIER, K.; KOKENYE, A.; BABA, C. *The effectiveness of capital controls and prudential policies in managing large inflows*. Washington, DC: International Monetary Fund, 2011. (IMF Staff Discussion Note, SDN/11/14).

INTERNATIONAL MONETARY FUND. *Reaping the benefits of financial globalization*. Washington, DC: International Monetary Fund, 2007.

INTERNATIONAL MONETARY FUND. *Recent experiences in managing capital inflows – cross-cutting themes and possible policy framework*. Washington, DC: International Monetary Fund, 2011a.

INTERNATIONAL MONETARY FUND. *The multilateral aspects of policies affecting capital flows*. Washington, DC: International Monetary Fund, 2011b.

INTERNATIONAL MONETARY FUND. *Macroprudential policy: an organizing framework*. Washington, DC: International Monetary Fund, 2011c.

INTERNATIONAL MONETARY FUND. *The liberalization and management of capital flows*. Washington, DC: International Monetary Fund, 2012a.

INTERNATIONAL MONETARY FUND. *Liberalizing capital flows and managing outflows*. Washington, DC: International Monetary Fund, 2012b.

INTERNATIONAL MONETARY FUND. *Guidance note for the liberalization and management of capital flows*. Washington, DC: International Monetary Fund, 2013a.

JOHNSTON, B.; RYAN, C. *The impact of controls on capital movements on the private capital accounts of countries balance of payments: empirical estimates and policy implications*. Washington, DC: International Monetary Fund, 1994. (IMF Working Paper, WP/94/78).

JOHNSTON, B.; TAMIRISA, N. *Why do countries use capital controls?* Washington, DC: International Monetary Fund, 1998. (IMF Working Paper, WP/98/181).

KAMINSKY, G.; REINHART, C.; VÉGH, C. *When it rains, it pours: procyclical capital flows and macroeconomic policies.* Cambridge, MA: National Bureau of Economic Research, 2004. (NBER Working Paper, n. w10780).

KLEIN, M. *Capital controls: gates versus walls.* Cambridge, MA: National Bureau of Economic Research, 2012. (NBER Working Paper, n. w18526).

KORINEK, A. The new economics of prudential capital controls: A research agenda. *IMF Economic Review*, v. 59, n. 3, p. 523-561, 2011.

KORINEK, A. *Capital controls and currency wars.* Unpublished Manuscript. Department of Economics, University of Maryland, Maryland, United States, 2012.

KOSE, M. A.; PRASAD, E.; ROGOFF, K.; WEI, S. J. Financial globalization: a reappraisal. *IMF Staff Papers*, v. 56, n. 1, p. 8-62, 2009.

LANE, P. R.; MILESI-FERRETTI, G. M. The external wealth of nations mark II: Revised and extended estimates of foreign assets and liabilities, 1970-2004. *Journal of International Economics*, v. 73, n. 2, p. 223-250, 2007.

MAGUD, N. E., REINHART, C. M., & ROGOFF, K. S. *Capital controls: myth and reality – A portfolio balance approach.* Cambridge, MA: National Bureau of Economic Research, 2011. (NBER Working Paper, n. w16805).

OCAMPO, J. A. Balance-of-payments dominance: implications for macroeconomic policy. In: DAMILL, M.; RAPETTI, M.; ROZENWURCEL, G. (Ed.). *Macroeconomics and development: Roberto Frenkel and the Economics of Latin America.* Columbia University Press, 2016.

OLIVEIRA, G. C. Desajustes globais e a inserção da periferia (1990-2010). *Revista Tempo do Mundo*, v. 3, n. 1, p.157-187, 2011.

OLIVEIRA, G. C. Instabilidade estrutural e evolução dos fluxos internacionais de capitais privados líquidos para a periferia (1990-2009). In: CINTRA, M. A.; GOMES, K. D. R. (Org.). *As transformações no sistema financeiro internacional.* IPEA, v. 2, p. 501-545, 2012.

OSTRY, J. D.; GHOSH, A. R. *Obstacles to international policy coordination, and how to overcome them.* Washington, DC: International Monetary Fund, 2013. (IMF Staff Discussion Note, SDN/13/11).

OSTRY, J. D.; GHOSH, A. R.; CHAMON, M.; QURESHI, M. S. Tools for managing financial-stability risks from capital inflows. *Journal of International Economics*, v. 88, n. 2, p. 407-421, 2012.

OSTRY, J. D.; GHOSH, A. R.; HABERMEIER, K.; CHAMON, M.; QURESHI, M.; LEAVEN, L.; KOKENYE, A. *Managing capital inflows: what tools to use?* Washington, DC: International Monetary Fund, 2011. (IMF Staff Discussion Note, SDN/11/06).

OSTRY, J. D.; GHOSH, A. R.; HABERMEIER, K.; CHAMON, M.; QURESHI, M.; REINHARDT, D. *Capital inflows: the role of controls.* Washington, DC: International Monetary Fund, 2010. (IMF Staff Position Note, SPN/10/04).

- OSTRY, J. D.; GHOSH, A. R.; KORINEK, A. *Multilateral aspects of managing the capital account*. Washington, DC: International Monetary Fund, 2012. (IMF Staff Discussion Note, SDN/12/10).
- OSTRY, J. D.; LOUNGANI, P.; FURCERI, D. Neoliberalism: oversold? *Finance & Development*, v. 53, n. 2 p. 38-41, 2016.
- PASRICHA, G. K.; FALAGIARDA, M.; BIJSTERBOSCH, M.; AIZENMAN, J. Domestic and multilateral effects of capital controls in emerging markets. *Journal of International Economics*, v. 115, p. 48-58, 2018.
- PRASAD, E.; RAJAN, R. *Controlled capital account liberalization: a proposal*. Washington, DC: International Monetary Fund, 2005. (IMF Policy Discussion Paper, PDP/05/xx).
- PRASAD, E.; RAJAN, R.; SUBRAMANIAN, A. Foreign capital and economic growth. *Brookings Papers on Economic Activity*, v. 1, p. 153-209, 2007.
- PRASAD, E.; ROGOFF, K.; WEI, S.; KOSE, A. *Effects of financial globalization on developing countries: some empirical evidence*. Washington, DC: International Monetary Fund, 2003. (IMF Occasional Paper, n. 220).
- PRATES, D. M. As assimetrias do sistema monetário e financeiro internacional. *Revista de Economia Contemporânea*, v. 9, n. 2, p. 263-288, 2005.
- PRATES, D. M.; CINTRA, M. A. M. Keynes e a hierarquia de moedas: possíveis lições para o Brasil. In: SICSÚ, J.; VIDOTTO, C. (Org.). *Economia do desenvolvimento: teoria e políticas keynesianas*. Rio de Janeiro: Campus Elsevier, 2008. p. 175-199.
- REINHART, C. M.; ROGOFF, K. S.; SAVASTANO, M. A. *Debt intolerance*. Cambridge, MA: National Bureau of Economic Research, 2003. (NBER Working Paper, n. w9908).
- REY, H. *Dilemma not trilemma: the global financial cycle and monetary policy independence*. (NBER Working Paper, n. w21162). Cambridge, MA: National Bureau of Economic Research, 2015.
- RODRIK, D.; SUBRAMANIAN, A. Why did financial globalization disappoint? *IMF Staff Papers*, v. 56, n. 1, p. 112-138, 2009.
- RODRIK, D.; VELASCO, A. *Short-term capital flows*. Cambridge, MA: National Bureau of Economic Research, 1999. (NBER Working Paper, n. w7364).
- ROSSI, M. *Financial fragility and economic performance in developing economies: do capital controls, prudential regulation and supervision matter?* Washington, DC: International Monetary Fund, 1999. (IMF Working Paper, WP/99/66).
- SCHINDLER, M. Measuring financial integration: a new data set. *IMF Staff papers*, v. 56, n. 1, p. 222-238, 2009.