NBER WORKING PAPER SERIES

INTERNATIONAL COORDINATION AND PRECAUTIONARY POLICIES

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Working Paper 21793
http://www.nber.org/papers/w21793

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
Cambridge, MA 02138
December 2015

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NBER Working Paper No. 21793
December 2015
JEL No. F36,F41,F42

ABSTRACT

This paper highlights the rare conditions leading to international cooperation, and the reasons why eliciting this cooperation may be beneficial in preventing adverse tail shocks from spiraling into global depressions. In normal times, deeper macro cooperation among countries is associated with welfare gains akin to Harberger's second-order magnitude triangle, making the odds of cooperation low. When bad tail events induce imminent and correlated threats of destabilizing financial markets, the perceived losses have a first-order magnitude of terminating the total Marshalian surpluses. The apprehension of these losses in times of peril may elicit rare and beneficial macro cooperation. We close the paper by overviewing the obstacles preventing cooperation, and the proliferation of precautionary policies of emerging market economies as a second-best outcome of limited cooperation.

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1. Introduction

The Global Financial Crisis (GFC) has renewed the debate on the benefits and limitations of international coordination of macro policies. This paper takes stock of the GFC lessons regarding the usefulness and limitations of international macro cooperation in perilous times. The history of international cooperation during the GFC resembles a glass that is half full according to some or mostly empty to others. Remarkably, the U.S. Federal Reserve Bank (Fed) fostered international cooperation by an unprecedented expansion of swap lines from December 2007.[1] Yet, in January 30, 2014, Raghuram Rajan, Governor of the Reserve Bank of India noted

[1] "In response to mounting pressures in bank funding markets, the FOMC announced in December 2007 that it had authorized dollar liquidity swap lines with the European Central Bank and the Swiss National Bank to provide liquidity in U.S. dollars to overseas markets, and subsequently authorized dollar liquidity swap lines with each of the following central banks: the Reserve Bank of Australia, the Banco Central do Brasil, the Bank of Canada, Danmarks Nationalbank, the Bank of England, the European Central Bank, the Bank of Japan, the Bank of Korea, the Banco de Mexico, the Reserve Bank of New Zealand, Norges Bank, the Monetary Authority of Singapore, Sveriges Riksbank, and the Swiss National Bank. Those arrangements terminated on February 1, 2010. In May 2010, the FOMC announced that in response to the re-emergence of strains in short-term U.S. dollar funding markets it had authorized dollar liquidity swap lines with the Bank of Canada, the Bank of England, the European Central Bank, the Bank of Japan, and the Swiss National Bank. In October 2013, the Federal Reserve and these central banks announced that their existing temporary liquidity swap arrangements--including the dollar liquidity swap lines--would be converted to standing arrangements that will remain in place until further notice." from The Boards of Governors Policy Overview, *Dollar Liquidity Swap Lines* http://www.federalreserve.gov/monetarypolicy/bst_liquidityswaps.htm (accessed November 25, 2015)

that "international monetary cooperation has broken down… The U.S. should worry about the effects of its policies on the rest of the world."

The complex history of limited global cooperation was evaluated by Eichengreen (2014), who conclude that successful cooperation is most likely when it centers on technical issues, when cooperation is institutionalized, when it is concerned with preserving an existing set of policies and behaviors, and when it occurs in the context of broad reciprocity among nations. Frankel (2015) provided a synopsis of the history of international economic cooperation from the Great Depression, analyzing episodes in which countries behaved cooperatively or non-cooperatively in international fiscal and monetary games. Frankel concluded that perceptions of the signs of spillovers and directions of coordination vary widely and inhibit cooperation. Furthermore, the existence of different models and domestic interest groups is as important as the difference between cooperative and non-cooperative equilibria. Complaints about foreigners' actions and calls for cooperation may obscure the need to settle disagreements domestically.

A central policy lesson of these insightful papers is that international cooperation is rare, and occurs mostly in exceptional circumstances. Hence, countries may invest more in precautionary strategies and putting their house in order in anticipation of trouble. In this paper I highlight the rare conditions leading to international cooperation, and the reasons why eliciting such cooperation may be needed to preventing adverse tail shocks from spiraling into global depressions. Section 3 presents an overview of the obstacles preventing cooperation, including status quo biases and costly stakeholder wars of attrition that aim to minimize their share of adjustment costs. Section 4 focuses on policy implications, linking the discussion to precautionary policies of emerging markets economies (EMs) as the second-best outcome of limited cooperation.

2. Circumstances leading to greater international cooperation

The rarity of international cooperation suggest that in "normal times," in the absence of bad tail events, the costs of deeper international cooperation fall short of the benefits. This concept is in line with the presumption that the gains from cooperation have the size of Harberger's triangle, about 0.5% - 1% GDP points.[2] Such gains may not be worth the possible income redistribution effects, which may be of even larger magnitude than efficiency gains from cooperation.

Figure 1: Harberger's triangle versus total Marshalian surpluse

In contrast, clearly adverse tail events that may induce the immanent collapse of financial markets would bring massive losses. Collapsing financial markets may terminate the entire Marshalian surpluses associated with normal operations, triggering global financial contagion in domestic and global networks, and generating costs of double-digit GDP points. Thereby, in normal times, the cooperative solution is associated with welfare gains akin to Harberger's second-order magnitude triangle, and as such the odds of cooperation are low. In circumstances of bad tail events inducing imminent and correlated threats of destabilization in most countries, the perceived losses have a first-order magnitude of terminating the total Marshalian suplus.[3] This imminent threat may promote international cooperation.

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[2] See Harberger (1954, 1959) for discussions on the second order costs of distortions. See Obstfeld and Rogoff (2002) for a model where the benefits from monetary policy coordination that might arise in a two-country world are small and may be swamped by the gains from pursuing stabilization policies within the individual countries.

[3] Tobin (1977)'s view on this issue is clear: "*It takes the heap of Harberger triangles to fill an Okun Gap.*"

The first year of the GFC illustrates that exceptional circumstances may lead to beneficial cooperation. The FED swap lines that were activated during the quarters leading to the GFC is a prime example of bad tail events inducing global cooperation. The pre-crisis dynamics led to a huge dollar-funding gap with the potential of leading to the collapse of a large share of the global banking system and thereby wiping the surpluses associated with the liquidity and credit services of financial intermediation. The magnitude of the dollar-funding gap in 2007 and 2008 was unprecedented. According to BIS (2009) report,

"If we assume that these banks' liabilities to money market funds (roughly $1 trillion, Baba et al (2009)) are also short-term liabilities, then the estimate of their US dollar funding gap in mid-2007 would be $2.0–2.2 trillion. Were all liabilities to non-banks treated as short-term funding, the upper-bound estimate would be $6.5 trillion…

On 13 October 2008, the swap lines between the Federal Reserve and the Bank of England, the ECB and the Swiss National Bank became unlimited to accommodate *any* quantity of US dollar funding demanded. The swap lines provided these central banks with ammunition beyond their existing foreign exchange reserves (Obstfeld et al (2009)), which in mid-2007 amounted to $294 billion for the euro area, Switzerland and the United Kingdom combined, an order of magnitude smaller than our lower-bound estimate of the US dollar funding gap.

In providing US dollars on a global scale, the Federal Reserve effectively engaged in *international lending of last resort*. The swap network can be understood as a mechanism by which the Federal Reserve extends loans, collateralised by foreign currencies, to other central banks, which in turn make these funds available through US dollar auctions in their respective jurisdictions. This made US dollar liquidity accessible to commercial banks around the world, including those that have no US subsidiaries or insufficient eligible collateral to borrow directly from the Federal Reserve System.

The quantities of US dollars actually allotted through US dollar auctions in Europe provide an indication of European banks' US dollar funding shortfall at any point in time (Figure 8). Most of the Federal Reserve's international provision of US dollars was indeed channeled through central banks in Europe, consistent with the finding that the funding pressures were particularly acute among European banks. Once the swap lines became unlimited, the share provided through the Eurosystem, the Bank of England and the Swiss National Bank combined was 81% (15 October 2008), and it has remained in the range of 50–60% since December 2008."

McGuire and von Peter, 2009, "The US dollar shortage in global banking and the international policy response" BIS WP 291.

The benefits of swap lines may be modeled using a version of the Diamond and Digivid (1983) paper in which the lender of last resort may prevent the first-order costs of a financial panic on the order of magnitude of those observed during the Great Depression.[4] The cost-benefit analysis of international cooperation is illustrated in Figure 2 in which a deeper international cooperation effort is measured to the right along the X axis and the marginal cost of eliciting deeper cooperation is measured vertically along the solid MC curve. The marginal benefit in the aftermath of a bad tail event is traced by the dotted *MB [Financial Crisis]* curve, resulting in cooperation level CO and inducing first-order benefits traced in the large shaded triangle below the *MB [Financial Crisis]* curve and above the MC line. In contrast, in normal times, the marginal benefits associated with eliciting cooperation is traced by the broken *MB [No Crisis]* curve, located below the *MC* curve, too small to elicit cooperation.[5]

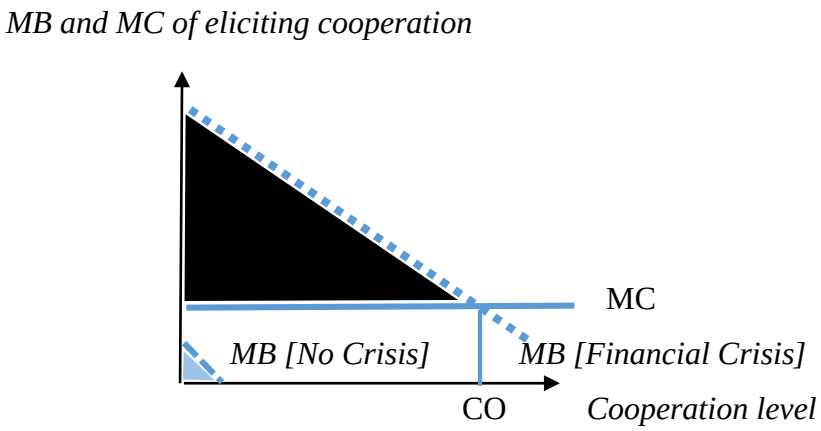

Figure 2: Eliciting cooperation during a financial crisis, CO, leads to first-order welfare gain

[4] The Appendix of Aizenman and Pasricha (2010) outlined such a model, where in circumstances of unanticipated deleveraging, swap-lines may prevent or mitigate costly liquidation, allowing investment projects to reach maturity and providing positive option value to both the source and the recipient countries.

[5] The gross benefits of cooperation in normal times are small, traced by the small triangle below the *MB [No Crisis]* curve, smaller than the gross cost of eliciting the needed cooperation.

This example suggests that a key benefit of ex ante international cooperation may be reducing the probability of bad tail events, as well as the balance-sheet exposure to such events.[6] This mission may be a top priority for international financial institutions (IFIs) and central banks (CBs). The benefits of such ex-ante cooperation include setting swap lines and establishing contingent credit lines and setting leverage rules reducing the amplitude of credit cycles. Achieving this cooperation cannot be taken for granted—ex ante cooperation have to deal with complex moral hazard and agency problems. Furthermore, the benefits of such cooperation are easily overlooked as the counter-factual; that is, identifying all the tail events that were prevented is hard to measure.

3. Obstacles Preventing Cooperation

The obstacles preventing cooperation may be hard to overcome. *Status quo bias* may reduce macro-economic cooperation, both domestically and internationally (see Samuelson and Zeckhauser, 1988). This is the case if policy makers and agencies take the view that *If it ain't clearly broken from my perspective, don't fix it.* In terms of Figure 2, this would correspond to adding a significant fixed cost to the decision to elicit cooperation. This fixed cost may reflect the concern that changing the status quo might trigger political costs, inducing the decision maker to delay action and thus gamble on resurrection. New policies may raise income distribution concerns, triggering a war of attrition among key stake-holders aimed at shifting the costs to others and delaying cooperation.[7] One expects that greater income inequality and polarization may intensify the incidence of wars of attrition that delay adjustment. This notion is in line with Rodrik (1999), who found that countries that experienced the sharpest drops in growth after 1975 were divided societies (as measured by indicators of inequality, ethnic fragmentation, and the like) with weak institutions of conflict management (measured by indicators of the quality of governmental institutions, rule of law, democratic rights, and social safety nets).

[6] See Rajan (2005) seminal paper for concerns about the growing exposure to tail risks.

[7] See Alesina and Drazen (1991) for a model of delayed stabilization, and Padovano and Venturi (2001) for a confirmation of this model in Italian government coalitions and fiscal performance.

To illustrate, the interpretation by Eichengreen and Sachs (1985) of the gains from competitive devaluation during the Great Depression is an example of a non-cooperative outcome that leads over time toward an aftereffect akin to a coordinated global monetary expansion. The delay in achieving this cooperative outcome may reflect the resistance of domestic powerful groups (e.g., "rentiers"), engaging in a war of attrition against interest rate cuts and monetary expansions. Similarly, it may be easier to achieve large fiscal and current account adjustments—frequently needed to stabilize developing countries—in places with lesser polarization. An example to this is South Korea, which improved its current account by about 13% GDP points in the two years following the East-Asian crisis. Although this adjustment was feasible in South Korea, it was not in Euro-periphery countries in recent years nor in most developing countries. Status quo bias may also explain CBs' unwillingness to increase inflation-targeting from 2% to 4% in times of global peril, as was advocated by Blanchard, Dell'Ariccia, and Mauro 2010.

Principle-agent, moral hazards, and political constraints matter, as they restrict the feasibility of ex-ante cooperative arrangements, and ex-post stabilization efforts. The provision of swap lines by the U.S. Fed during the GFC is a prime example of international cooperation inducing first-order effects. However, the Fed only extended these swap lines to 4 EMs. The selectivity of these swap lines reflected the imminent cost to U.S. financial institutions of possible defaults by Mexican and Korean counterparties. Exposure of U.S. banks to EMs turned out to be the most important selection criterion for the swap-lines provided by the Fed to the selected four EMs (see Aizenman and Pasricha, 2010). This selectivity probably reflected the FED's concern that its future independence would be constrained by over-extending swap lines to emerging markets with history of sovereign defaults. China does not face such constraints, and is supplying swap lines to large groups of developing countries, including Argentina and other countries with a history of defaults.

4. Precautionary Policies

Developing countries and EMs are more vulnerable to adverse tail events. Limited financial depth, inability to borrow in their own currency, less developed institutions and possible history of defaults imply greater vulnerability. The scarcity of global cooperation at times of peril suggests that EMs would benefit from building precautionary buffers during tranquil times, such as international reserves (IR) and sovereign wealth funds (SWF). The precautionary logic of hoarding international reserves can be outlined in models inspired by Diamond and Digvid (1983) and Calvo (1998), in which international reserves may reduce the costs associated with sudden stops and capital flight crises (see Aizenman and Lee, 2007). However, relying mainly on international reserves may miss the benefits associated with policies aimed at controlling a country's balance-sheet exposures, e.g., reducing its short-term external borrowing (Rodrik, 2006).

The limitations of reserves in preventing a financial panic were vividly illustrated during the GFC by South Korea. Less than a decade after the East Asian Crisis, Korea's international reserves/GDP in 2005 seemed to be more than adequate using conventional yardsticks – IR that exceeded short-term debt and allowed financing several quarters of imports. Following the sizable increase in Korea's external debt after 2005, the sense of IR abundance in South Korea evaporated. The Korean external short-term debt/GDP ratio increased from 7.5% in 2004 to 20% in 2008 while the overall external debt/GDP increased during that period from 23% to 50%, without a significant change in the IR/GDP ratio. The onset of the global liquidity crisis in 2008 and the ensuing deleveraging vividly illustrated South Korea's fragile balance-sheet. During the first stage of the crisis, South Korea's reserves dropped by $60 billion in half a year, a decline of about 25%. International reserves were key to the bailout package that the Korean government unveiled in the second half of 2008. The center-piece of the package was a $100 billion three-year government guarantee for Korean banks' foreign debt. This sum was more than sufficient to cover the banks' foreign debt maturation by June 2009, estimated by the Korean Ministry of Strategy and Finance to be approximately $80 billion.

However, Park (2009) noted that despite the large hoarding of international reserves used to finance the bailout package, market concerns were not abated: "Similar guarantees had failed to allay fears of financial meltdown at the beginning of the Asian crisis in 1997 and they failed again. As in 1997, the market reactions were indifferent. Only when Korea secured a swap line

amounting to $30 billion from the Fed on October 30 the foreign exchange market settled down somewhat, but not very long… Only when it was made clear that the Fed would renew the swap agreement, foreign investors' confidence in the Korean economy improved and stability in the foreign exchange market returned toward the end of the first quarter of 2009."

A possible lesson articulated by Professor Hyun-Song Shin [serving in 2009-2010 as the chief economic advisor to President Lee Myung-bak] are policies inducing the private sector to internalize the social costs of external hard-currency borrowing, possibly by relying on Pigovian taxes.[8] These considerations are reflected in the proliferation of Marco-prudential policies after the GFC,[9] and exemplified by the policies adopted by South Korea in 2010. Bruno and Shin (2014) credited these policies with the decrease of the sensitivity of capital flows into South Korea to global conditions in the period following the introduction of macro-prudential policies. The deeper proliferation of SWFs, serving as a second line of defense by augmenting international reserves with other foreign assets, implies that EMs may also strive towards deeper cooperation between their CBs, SWFs and national Treasuries. The pioneering papers of Frankel, 2011, and Frankel et al., 2013, show that this can be done, with Chile as a prime example.

Greater exchange rate flexibility is another margin of safety, mitigating the moral hazard game between the private sector (ignoring exchange rate risk) and the CB (which is expected to bail out systemic balance sheet exposure). Indeed, EMs took these lessons to heart after the financial crises of the 1990s. These precautionary policies were tested by the GFC, with mixed outcomes, leading Rey (2013) to doubt the usefulness of exchange rate flexibility. Specially, Rey concluded that a potent global financial cycle exists in gross capital flows, credit creation and asset prices, all of which have tight connections with fluctuations in uncertainty and risk aversion. The global financial cycle is closely related to the VIX, and particularly related to the role of monetary policy in the center country. Accordingly, this potent cycle invalidates Mundell's trilemma and leads to a new "irreconcilable duo" dilemma, in which independent monetary policies are possible if and only if the capital account is managed, directly or indirectly via macro-prudential policies.

[8] See Olivier and Korinek (2010), Aizenman (2011) and Korinek and Sandri (2014).

[9] See Borio (2003) and Blanchard, Dell'Ariccia, and Mauro (2013).

Chances are, however, that claims of the Trilemma's death and the futility of flexible exchange rate regimes are exaggerated. An alternative take is that Mundell's trilemma morphed into a quadrilemma, wherein financial stability is a fourth dimension of a desirable macro outcome. For most financial variables, the strength of the links with the center economies have been the dominant factor over the last two decades, while the movements of the policy interest rate have also appeared sensitive to global financial shocks around the emerging market crises of the late 1990s and since the global financial crisis of 2008. While certain macroeconomic and institutional variables are important, the arrangement of open macro policies such as the exchange rate regime and financial openness are also found to have a direct influence on sensitivity to the center economies (Aizenman, Chinn, and Ito, 2015).

An economy that pursues greater exchange rate stability and financial openness faces a stronger link with the center economies through policy interest rates and real effective exchange rate (REER) movements. Exchange market pressure (EMP) in peripheral economies is sensitive to the movements of the center economies' REER and EMP during and after the GFC. Open macro policy arrangements, especially exchange rate regimes, also have indirect effects on the strength of financial linkages by interaction with other macroeconomic conditions. Thus, trilemma policy arrangements, including exchange rate flexibility, continue to affect the sensitivity of developing countries to policy changes and shocks in the center economies. In this context, the quality of institutions matters; that is, countries that constrain their balance-sheet exposure keep benefiting from exchange rate flexibility. Countries with better institutions may use marco-prudential policies and capital controls more effectively with exchange rate flexibility (Aizenman and Mahir, 2015).

Similarly, Ghosh, Ostry, and Qureshi (2015) found that macroeconomic and financial vulnerabilities are significantly greater under less flexible exchange rate regimes—including hard pegs—as compared with floats. Although not especially susceptible to banking or currency crises, hard pegs are significantly more prone to growth collapses, suggesting that the security of the hard end of the prescription is largely illusory. Blanchard, Ostry, Ghosh, and Chamon (2015) outline a mechanism in which greater against-the-wind intervention by the central bank to prevent currency overvaluation reduces a crisis likelihood, while greater intervention to defend an overvalued currency raises a crisis likelihood. In this context, disaggregation matters. For a given policy interest rate, bond inflows lead to currency appreciation and are contractionary,

while non-bond inflows lead to an appreciation as well as a decrease in the cost of borrowing, and thus may be expansionary. These observations led the authors to conclude that monetary policy and foreign exchange intervention can, in principle, offset the effect of inflows on both exchange rates and the rate of return to non-bonds without a need for capital controls. Blanchard, Adler, and de Carvalho (2015) show empirical results that are broadly supportive of the abovementioned interpretation. While bond inflows have a negative effect on economic activity, non-bond inflows have a significant and positive effect. Non-bond inflows (excluding foreign direct investment, FDI) have a strong positive effect on credit, much stronger than bond flows. FDI inflows, while increasing output, have a negative impact on credit, perhaps because some of the intermediation that would have taken place through banks is replaced by FDI financing.

Latin American countries (LATAMs) may provide useful lessons. The GFC increased LATAMs' exposure to larger and more volatile financial flows, and to adverse shocks that followed the GFC. Starting in 2014, these shocks include LATAMs' collapsing terms of trade due to the drop in commodity prices. However, most of the LATAMs have so far retained their resilience, wherein managed exchange rate flexibility and greater coordination between domestic institutions has helped. Chances are that the flexibility of the exchange rate of Mexico and other LATAMs has so far prevented a balance of payment cum banking crises, akin to the one observed during the 1990s (the 1994-5 *Tequila* crisis in Mexico, and the Russia and Brazilian crises of 1998-9). Exchange rate flexibility has also contributed in increasing financial stability in countries that have managed their balance-sheet exposure efficiently.

Exchange rate flexibility has other side benefits such as reducing the exposure of countries to destabilizing dynamics of the type experienced by Spain and other exposed Eurozone countries in 2010-2012. Specifically, the fixed exchange rate associated with being a euro member restrains Spain's ability to quickly improve its competitiveness by means of a nominal exchange rate adjustment, thus exposing the country to destabilizing rises in its sovereign spreads, as was highlighted by the contrast between Spain and the U.K. analyzed by de Grauwe and Ji, 2013. They pointed out that bond markets in a monetary union are more fragile and susceptible to self-fulfilling liquidity crises, as countries in a monetary union like the Eurozone are unable to rely on monetary policy to stabilize the economy, and to provide an effective lender of last resort support for the domestic banking system.

A similar illustration of the gains from exchange rate flexibility is the contrast between Poland [flexible exchange rate country, EU member], Germany and Spain [Eurozone countries]. Chart 3 shows the remarkable resilience of Poland, managing overall a steady and positive real GDP growth rate under flexible exchange rate during the 2000s, experiencing a much milder exposure to the global financial crisis and the Eurozone crisis than did Germany and Spain.[10] In the same vain, LATAMs, Russia and other commodity countries buffered the adverse commodity shocks of 2014-2015 via exchange-rate depreciations and spending some of their international reserves. These actions facilitated an easier adjustment in countries with limited balance-sheet exposure, but posed a challenge to countries with greater exposure.

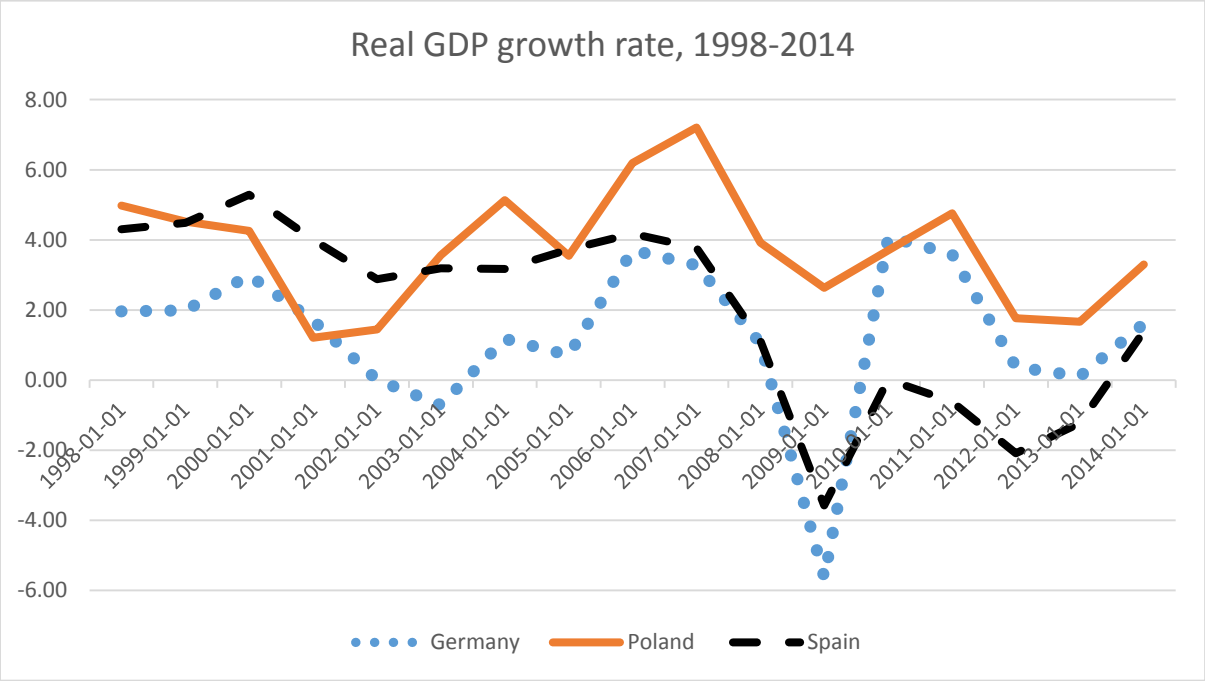

Figure 3, Real GDP growth rate, 1998-2014,
Poland [solid curve], Germany [dashed curve], Spain [dotted curve]. Data source: FRED

[10] The GDP/Capital growth rate decline during the GFC [2006 to 2008] was about 4% in Poland, half of the decline experienced by Germany and Spain. Remarkably, the public debt/GDP of Poland increased mildly from 45% in 2007 to 57% in 2013, while that of Spain almost tripled during that period, rising from 37% to 94%. The Zloty/Euro rate depreciated by 44% during the GFC [rising from 3.21 zloty/euro in 6/30/2008 to 4.64 zloty/euro in 2/1/2009], mitigating the recessionary impact of the crisis.

However, a flexible exchange rate is not a magic remedy: among n flexible exchange rate currencies, only n – 1 are independent at most. Size matters even under flexible exchange rate regimes. The weakening gains from exchange rate flexibility highlighted by Rey (2013) may be the outcome of the events leading to the GFC; in which financial instability in the U.S. was transmitted globally due to global balance-sheet exposure, as the U.S. global share in finance vastly exceeded its global GDP share.[11] These factors, however, do not negate the usefulness of managed exchange rate flexibility in dealing with terms of trade shocks, domestic disturbances, and other shocks. Indeed, the lesson of the 1990s has been that emerging markets converged to the middle ground of Mundell's trilemma: controlled exchange rage flexibility and limited financial integration, retaining monetary independence, as shown in Figures 4 and 5.

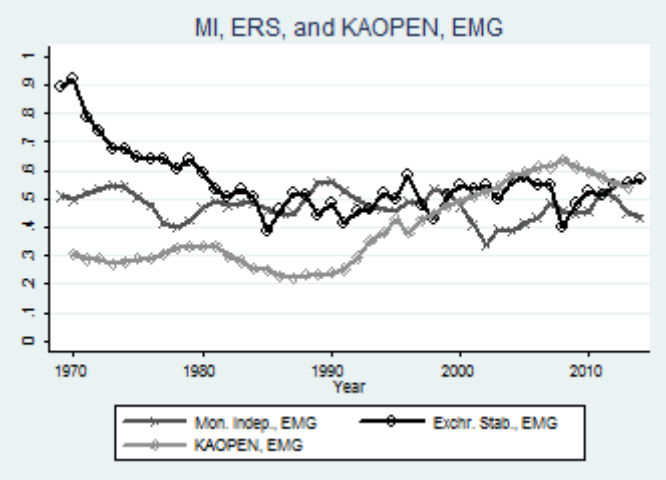

Figure 4, Emerging Markets Trilemma Configuration, 1970-2014[12]

[11] Approximately two thirds of global corporate bonds outstanding are issued in U.S. $. Similarly, the global share of U.S. government Bonds in international reserves has hovered around 60% in recent decades, more than twice the global GDP share of the U.S.

[12] Figures 4 and 5 plot indexes for the trilemma policies, Monetary Independence, Exchange Rate Stability and Financial Integration, normalize in the 0 to 1 range. Figure 5 adds a fourth dimension, International Reserves/GDP, associated with prudential buffers. For further details, see http://web.pdx.edu/~ito/trilemma_indexes.htm.

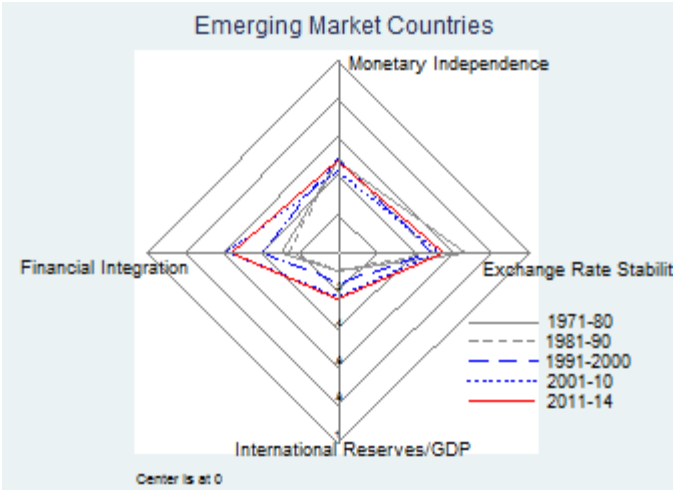

Figure 5: Emerging Markets changing policy configurations,
1970s, 1980s, 1990s, 2000s, and 2011-2014

5. Conclusion

The scarcity of global cooperation validates the need for countries to put their house in order. This recommendation does not negate the key importance of global cooperation in the aftermath of bad tail events—i.e., shocks that may induce a global depression. A key role of IFIs and CBs remains facilitating deeper ex-ante international cooperation aimed at reducing the probability of such tail events. Time will continue to test the viability of such cooperation.

The evolution of emerging markets in past decades may reflect the learning process induced by the sudden stop crises that have followed their financial openings of the 1990s (Aizenman and Pinto, 2013). Emerging market economies have moved over time from fixed exchange rate and closed financial systems during the Bretton Woods system to controlled exchange rage flexibility and limited financial integration, retaining monetary independence. This configuration, properly buffered by precautionary policies (hoarding international reserves and controlling external borrowing) may be Emerging Market Economies' second-best response to the limited efficacy of international coordination.

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