# RTI Working Party on Global Liquidity

## Background Note

## Introduction

The purpose of this background note is to provide relevant material explaining why the Robert Triffin International (RTI) Association has decided to launch a Working Party on « Managing Global Liquidity as a Global Public Good » ( or Working Party on Global Liquidity , WPGL) and paving the way for the collective reflections of its forthcoming members.

It recalls the links between the issue of global liquidity and the famous Triffin dilemma and more broadly how this issue fits in Robert Triffin's intellectual heritage. It then places the launching of the WPGL in the context of RTI's objectives and of its Triffin 21 Initiative, which started in 2010 with the seminal lecture of the late Tommaso Padoa-Schioppa on « The ghost of bancor : the economic crisis and global monetary disorder ».

RTI supported in 2010-2011 the Palais Royal Initiative (PRI), which spelled out a number of concrete recommendations towards reform of the international monetary system (IMS), including on liquidity provision in crisis times. To complete the work of the PRI, RTI launched in 2013 a Working Party on how a wider use of the Special Drawing Rights (SDRs) could become a lever towards reform of the IMS. The PRI report had recommended that the IMF and the BIS should work together towards a shared analytical approach for a better measurement and surveillance of liquidity. This was the purpose of the Landau's Report on Global Liquidity, written in 2011 under the auspices of the Committee on the Global Financial System of the BIS. The BIS, followed by the IMF, has continued to compile statistics on global liquidity and to do research on the main drivers of liquidity conditions as well as on the impact of unconventional monetary measures undertaken in the US, Japan, the UK and the Eurozone on global liquidity and monetary conditions. Jaime Caruana, General Manager of the BIS, called also repeatedly for keeping an eye on global liquidity and enhancing international cooperation.

Michel Camdessus and Anoop Singh have further refined and argumented their proposal of managing global liquidity as a public good, relying among others on assessesments prepared by a high level group of central bankers that would be charged with overseeing global liquidity. Fabrizio Saccomanni expressed also concern about the dramatic rise of indebtedness in recent years and presented his views on how the system could be significantly improved if not fundamentally reformed. The role of international financial markets in determining global liquidity conditions has been analysed by Hélène Rey and other academic economists. The views of some leading experts from emerging countries of Asia and Latin America are also presented.

Last but not least, at their recent summit in Buenos Aires, the G20 leaders have taken interest in the issue, reffirming their commitment to further strengthening the global financial safety net and welcoming the Report submitted to them by a G20 Group of Eminent Persons on Global Financial Governance. Nevertheless, as we shall see, little concrete action

has taken place. The WPGL set up by RTI would be timely in drawing urgent attention to this issue and in searching for the appropriate approach to the management of liquidity at the international level with a view to ensuring balanced monetary and financial conditions in the long run and providing an adequate safety net in time of stress.

## Global liquidity in Robert Triffin's intellectual heritage[1]

The issue of global liquidity was at the very core of the academic work of the Belgian - American economist Robert Triffin (1911-1993). Triffin was in the footsteps of John Maynard Keynes in his search for a genuine international solution for the world liquidity problem, the true « internationalization » of the foreign exchange component of the world international reserves.

Already in his essay *National Central Banking and the International Economy*[2], published in 1946, Triffin expressed his preoccupation for the liquidity position of the international monetary system. In his book *Europe and the Money Muddle : from Bilateralism to Near-convertibility, 1947-1956,*[3] published in 1957, he observed that the world's liquidity requirements were being increasingly met by the growth of foreign exchange reserves, especially dollar balances. He was very concerned by this, having in mind the inter-war experience of the instability of sterling balances as a complement to other sources of international liquidity. This led him to enunciate in his next book *Gold and the Dollar Crisis : the Future of Convertibility*[4], the book that made Triffin famous in 1960, what became the « Triffin dilemma » : « *The gold exchange standard may ….help in relieving a shortage of world monetary reserves. It does so only to the extent that the key currency countries are willing to let their net reserve position decline through increases in their own reserves. If they allow this to happen, however, and to continue indefinitely, they tend to bring about a collapse of the system itself through the gradual weakening of foreigners' confidence in the key countries* ». Triffin did not wait for the collapse of the Bretton Woods system to take place, which eventually occured in 1971. He proposed a solution to the dilemma in the form of « *broadeaning the basis of the gold standard and of protecting the system against erratic and unnecessary shifts from one reserve currency into another and from reserve currencies into gold : this could be done by inducing or requiring all countries – or at least all major countries – to maintain an appropriate proportion of their international monetary reserves in the form of a deposit account with the IMF. Such accounts would be fully usable in interrnational payments and would carry an exchange guarantee with respect either to gold or to an internationally defined unit of account* » .

In November 1960, Triffin became a member of a task force, under the chairmanship of George Ball, which prepared a report on the balance of payments for Kennedy, as US President-elect. In the section under the title « International Monetary Reform », the report

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[1] In this section, I have taken inspiration from unpublished research work by Ivo Maes on Triffin's dilemma and his proposals for a « true » international monetary system.

[2] Triffin R. , National Central Banking and the International Economy, *review of Economic Studies, vol XIV, n.36, 1946-1947.*

[3] Triffin R., *Europe and the Money Muddle,* New Haven, Yale University Press, 1957

[4] Triffin R., *Gold and the Dollar Crisis. The Future of Convertibility,* New Haven, Yale University Press, 1960

proposed to undertake a study on international liquidity and it considered alternative proposals for reforming the international monetary system. Under the urging of his Yale friend and colleague James Tobin, Triffin became a consultant to the Kennedy Council of Economic Advisers. Together they sought to advance the cause of internationalised liquidity in the US government.

The official debate on the functioniong of the Bretton Woods system and the ways to improve it was launched at the IMF Annual Meeting in October 1963. On that occasion the Group of Ten mandated its Deputies to indentify the major issues involved and the reforms that could be proposed. Moreover, following the Group of Ten's decision to exclude from their discussions economists' participation and hearings, a group of 32 academics, including Robert Triffin, who became known as the Bellagio group, organized a series of conferences where the critical shortcomings of the existing international monetary arrangements as well as the major approaches to international monetary reform were debated. The Bellagio group discussed the problem of liquidity, i.e. how to insure a growth of international reserves at a rate consistent with the increase of output and trade. It discussed also the problem of adjustment to avoid the growth of cumulative balance of payments disequilibria, and the problem of confidence in reserve assets, related to the risks for international financial stability arising from switches between reserve media. In the officials' circle, the international liquidity creation mechanism was also identified as the basic defect of the system. A consensus emerged to provide for multilateral surveillance of the various sources of liquidity creation and to explore ways to create a new reserve asset.

After long negotiations, the IMF countries agreed on the creation of this new reserve asset in the form of Special Drawing Rights (SDRs) at their meeting in Rio de Janeiro in September 1967. The new facilities would be used primarily for official settlements and each member country was obliged to accept the new reserve assets when presented to it by other members in accordance with the Fund's rules. Furthermore, when the IMF statutes were amended in 1969, the global community enshrined in Article 8 the commitment of each of its members to make the SDR « the principal reserve asset » in the IMS.

Triffin expressed mixed sentiment about the Rio Agreement. On the one hand, he welcomed the creation of the SDR as an essential step in the construction of the new international monetary order. However, in his view, the fundamental flaws of the international monetary system had not been remedied as long as no agreement was reached on the way in which the quantity of the traditional components of world reserves, in particular foreign exchange reserves, would be determined. An objection against the system was that it exempted the U.S. and the U.K. from the so-called balance-of-payment discipline. Furthermore, the reform could not stop with the mere surimposition of the new reserve asset upon the traditional ones. It had to encompass the role of all three types of reserve assets – gold and reserve currencies as well as SDRs - in the orderly growth of world reserves and the improvement of the adjustment mechanism. The new reserve asset had to be created by international agreement in the amounts needed to substitute for – rather than merely add to – dwindling gold supplies and overflowing reserve currencies, and to adjust overall reserve growth to the requirements of an expanding world economy rather than to

the vagaries of the gold market and of the U.S. and U.K. balance of payments. Triffin also criticized the distribution of SDRs in proportion of IMF quotas, arguing instead in favour of linking the creation of new SDRs to agreed development policies and objectives.

The Smithsonian Agreement of December 1971 and the subsequent generalization of floating exchange rates in 1973 signified officially the collapse of the Bretton Woods System. In fact, however, the dollar held its ground and even extended its influence. World reserves were increasingly expressed in dollars and the dollar remained important as an intervention currency too. The dollar further played a dominating role in the international capital markets. Indeed, as the U.S. had the deepest and most liquid financial markets, investors naturally gravitated towards the U.S. So the dollar could keep its pre-eminent role in the world financial system. Triffin admitted that he had completely underestimated the duration and the size of the U.S. deficits that foreign central bankers would be willing to absorb, at the cost of an inflationary explosion of world monetary reserves and of a multiple expansion of the money supply in their countries under the traditional system of fractional reserve requirements. He estimated that the flooding of world reserves by dollar and Eurodollar overflows caused them to double over the years 1969-72 and to redouble over the years 1973-77. He also drew the conclusion that the control of international liquidity had to encompass not only all three components of official world reserves (gold, foreign exchange and SDR or other reserve deposits in the IMF) but also the mushrooming of commercial-bank lending.

In the ensuing years, Triffin would be a harsh critic of the post Bretton Woods monetary system, which he would call « a paper-dollar standard ». Moreover, for him, IMS became the abbreviation for « International Monetary Scandal ». In his view, the root cause of the problems that were to hurt the global economy in the subsequent decades remained the use of a national currency, namely the dollar, as an international reserve asset or parallel currency. Looking for a more rational international monetary system, he advocated the use of an international currency. Obviously, such a solution required an agreed and strong multilateral governance framework at the global level, centered on the IMF. Triffin, like Keynes and many economists active in the post WWII period was a dedicated multilateralist. « *The fundamental dilemma of international economic relations in this twentieth century, he wrote already in 1957, lies in the inadequacy of national sovereignty as a framework for policy decisions and their administrative implementation in an interdependent world* »[5] . One can wonder what he would say today seeing the increasing hostility of some statesmen against the very concept of multilateralism.

However, Triffin was also a realist searching for practical ways of improving the situation. While getting more and more disillusioned about the future of the IMS, he moved to his next line of defense to preserve stability of exchange rates, the regional dimension. This is how he

[5] Triffin R. *Europe and the money Muddle,* New Haven, Yale University Press, 1957, p. 303

would become one of the intellectual architects of what would become after his death in 1993 the European Economic and Monetary Union[6]. But this is another story.

## Robert Triffin International (RTI) and the launching of the « Triffin 21 Initiative »

The wish to preserve for the posterity Robert Triffin's intellectual heritage and the manifold written testimonies of his activities inspired the creation in 2002, by economists and historians, of the Triffin International Foundation, subsequently renamed Robert Triffin International Association or RTI, under the chairmanship of Alexandre Lamfalussy (1929-2015), former Director General of the BIS and former President of the European Monetary Institute, and with the Compagnia di San Paolo di Torino as co-founder. RTI applied itself first to the task of collecting and classifying Triffin's considerable written output, including his unpublished papers, press articles and letters.

But RTI wanted in addition to exploit this heritage and to prolong this action into the 21st century, for both were born of a reflection that has remained very much alive. This led to the launching in 2010, with the Compagnia di San Paolo Torino and under the joint responsibility chairmanship of Alexandre Lamfalussy and of Tommaso Padoa-Schioppa (1940-2010) of the « Triffin 21 Initiative » ; this was aimed at highlighting the continued relevance of key ideas exposed by Robert Triffin and in particular at addressing the fundamental role in the 2007-2008 economic and financial crisis played by a flaw in the prevailing monetary arrangements which Triffin had clearly identified and denounced in his time. In this spirit, RTI organised its series of Triffin Lectures, the inaugural one being given by Tommaso Padoa-Schioppa, and subsequent ones by personalities such as Lorenzo Bini Smaghi, Michel Camdessus, Jose Antonio Ocampo, Marco Buti and Jean Lemierre.

## Padoa-Schioppa's lecture on « The Ghost of Bancor : the Economic Crisis and Global Monetary Disorder »

The inaugural Triffin lecture was given in Louvain-la-Neuve, Belgium, on 25 February 2010 on the theme « The Ghost of Bancor : the Economic Crisis and Global Monetary Disorder »[7] by Tommaso Padoa-Schioppa, former Minister of Economy and Finance of Italy and former Chairman of the International Monetary and Financial Committee of the IMF. It was followed by a symposium « Towards a World Reserve Currency » organized in Turin in May 2010 by the Compagnia di San Paolo and RTI.

[6] See Maes I. and Bussière E. « Robert Triffin : the Arch Monetarist in the European Monetary Integration Debate » in Dyson K. and Maes I, *Architects of the Euro, Intellectuals and the Making of European Monetary Union,* Oxford Universuty Press, 2016

[7] Tommaso Padoa-Schioppa, *The ghost of Bancor : the economic crisis and global monetary disorder,* Louvain-la-Neuve, 25 February 2010, Centre for Studies on Federalism

In the introduction to his lecture, Padoa-Schioppe summarized his argument in the following way : « *The deep causes of the (2007-2008) crisis include the dollar policy and, in a broader sense, the monetary regime that has been in force in the world for almost 40 years. Like the Bretton Woods system, it is incapable of imparting an acceptable macro-economic discipline to the world's economy because, being devoid of collectively accepted anchors, it encourages the persistence of unsustainable dynamics which spawn increasingly serious crises. Triffin's criticism of an international monetary system based on an exclusively national monetary policy is still valid, although today it demands a broader formulation capable of taking into account the exchange rate anarchy and a multiplicity of influential monetary policies. The issue of international monetary order is not being afforded due attention and it needs to be addressed. Paths of reform for the future are difficult to identify and even more difficult to pursue. That is precisely why it is urgent for the academic and scientific communities, and indeed for all those who harbor concern for the future of the global economy, to explore them*.»

As concerned the excess of liquidities, Padoa-Schioppa pointed first to domestic policies in the U.S. : « *The long boom in real estate prices developped in a context marked by overabundant liquidity, exceptionally low interest rates, inflation so low that it prompted some people to warn of the danger of deflation, and monetary policy's declared lack of interest in the price of assets and the formation of speculative bubbles* ». But what made such a course of action possible ? « *Two crucial factors made it possible to protract this navigation far beyond the point at which a route adjustment could still have been painless : the fact that it was the world's leading economic power sailing that route ; and the fact that that economy, being the world's central banker, was exempted from any external monetary discipline. In no other country in the world could we have seen the public sector and private households forgo every kind of saving and start building up massive debts as easily and for so long without suffering the consequences of their action* ». According to Padoa-Schioppa, the two key features of the post-Bretton Woods « order » - exchange rates left to the market and the dollar as the global standard - were not introduced by design ; they were not based on a body of economic research, nor had they been stipulated by international agreement. Both were largely adopted by default.

For Padoa-Schioppa, Triffin's basic contention was still valid, that « *if the global currency is a national currency, there is an irremediable contradiction between the issuing country's internal domestic requirements and the external requirements of the world using it* » but he reformulated in the present context what he called « Triffin's general dilemma » as follows : « *the stability requirements of the system as a whole are inconsistent with the pursuit of economic and monetary policy forged solely on the basis of domestic rationales in all monetary regimes devoid of some form of supranationality* ». He argued for the introduction of a global standard, the n+1 currency in a world of n countries, which should be the SDR as a sort of reincarnation of the Bancor proposed by Keynes. Nevertheless, Padoa-Schioppa reminded us that « *there is no way to get round the requirement of a policy framework anchoring the global standard to an objective of global stability* ».

## The Palais Royal Initiative

In October 2010, Michel Camdessus, former Managing Director of the IMF, Alexandre Lamfalussy and Tommaso Padoa-Schioppa, with the moral support of RTI, convened a group of 18 former Ministers, Governors, Heads of International Institutions and Senior Officials, which took the name of *Palais Royal Initiative* (PRI) to evaluate the international monetary system and to propose changes that might be needed to stabilize it and reduce the likelihood of future failures.

The report of the Palais Royal Initiative, *Reform of the International Monetary System*, [8]dated 11 February 2011, stressed that « *seemingly appropriate liquidity conditions in individual economies may add up to excesses or shortfalls internationally* ». In this respect it observed that, in the run up to the crisis, an unsustainable global expansion was facilitated by rapid growth in global credit and that when the crisis occurred, liquidity in financial markets all but evaporated. From peak to through, gross capital inflows worldwide fell from nearly 20% of global GDP to less than 2 %. The report expressed the view that « *Such extreme fluctuations have critical effects on the functioning of the global economic and financial system and macro-financial stability at the country level. Yet the phenomenon is poorly understood* »

Four of the 16 suggestions of the PRI Report deal with liquidity provision in crisis time, more specifically :

- Suggestion 9 : *The IMF and the BIS should work together towards a shared analytical approach for better measurement and surveillance of global liquidity, recognising the need of a set of indicators based on adequate statistical tools* ;
- Suggestion 10 : *The central banks and the authorities in charge of macro-prudential policies of systemically relevant economies should conduct their policies taking into account the need for broadly appropriate global liquidity conditions* ; *The IMF, the BIS and the FSB should regularly monitor developments in global liquidity with a view towards formulating recommendations for all systemically relevant countries regarding the conduct of their policies (including monetary and exchange rate policies, as well as financial regulatory and supervisory policies) with a potential impact on global liquidity ».*
- Suggestion 11 *: Use of capital controls, subject to IMF suerveillance under an amended Article VI, may be warranted as an option to prevet disorderly exchange rate movements or financial stability* ; and
- Suggestion 12 : *the IMF should work with relevant governments, central banks, and regional pools to put in place, with appropriate safeguards, permanent crisis financing mechanisms akin to a global lender of last resort*.

Overall the PRI report delivered two key messages : first, that the collective failure in establishing over four decades an IMS truly worthy of this name had been one of the key factors of the 2007-2008 crisis ; and second that, as long as no credible responses were given

[8] Boorman J.T. and Icard A., *Reform of the International Monetary System, The Palais Royal Initiative,* Sage, 2011

to the absence of effective discipline, to weak and ineffective surveillance and excesses of all kind, the increasingly integrated world economy would become all the more vulnerable as it simultaneously engaged in a process of transition toward a multicurrency regime. To face these risks, the Palais Royal Initiative proposed four avenues for reform : (i) surveillance – the IMF's very basic task – with real transparency, « teeth » and fairness ; (ii) strengthening the IMF in its instruments and in its legitimacy ; (iii) reexamining the scope of the SDR to play a greater role both as a reserve asset in an evolving system that would encourage the orderly diversification of existing reserves through their conversion into SDR-denominated claims, and as unit of account for private transactions and for invoicing commodities and international trade ; and (iv) important changes in the IMF's governance to strengthen the legitimacy of a renovated system.

The report inspired in the course of 2011 the G-20 Working Group on the Reform of the IMS in three key areas, namely enhanced surveillance, capital flows management and global liquidity management. The recognition by the Working Group of the need for progress in the monitoring and management of global liquidity was particularly welcome. The G20 experts endorsed Suggestions 9 and 10, suggesting in addition that a country-specific analysis should be made regarding drivers of reserve accumulation, and recognizing that this should support a more comprehensive and effective surveillance[9].

However, at the G20 Summit in November 2011, these proposals were crowded out by the onset of the sovereign debt crisis in the euro-zone, and relatively little ground was covered on the reform of the IMS. The bulk of the PRI suggestions and the G-20 proposals largely inspired by them are still available for consideration by public authorities.

The Report of the Palais Royal Initiative involved also important background material, in the form of contributions from the various authors. An interesting contribution on the theme « Toward an Orderly Supply of Reserves Currencies » was provided by Michel Camdessus and André Icard, former Deputy General Manager of the BIS[10]. In this contribution, the authors did not only express their « long-lasting concerns about an orderly supply of reserve currencies » but they also spelt out « what would be the key features of a desirable system » and outline a roadmap toward a safer system. It may be worthwhile to recall what, in the mind of the authors, the ambitious key features of this desirable and safer system were to be :

- *« It should be organised in such a way that the interaction between its domestic and international dimensions would provide discipline instead of encouraging distortions, and thereby lead in the medium term to sustainable balance of payments.*
- *It should be based on the acceptance by all of a multilateral surveillance system in which all countries would accept responsibilities commensurate with their own weight in international transactions.*

[9] See Camdessus M. , « The Palais-Royal Initiative and its Aftermath » , in Koeune J.-C. and Lamfalussy A., editors, *InSearch of a New World Monetary Order,* Peter Lang, 2012

[10] Camdessus M. and Icard A., « Toward an Orderly Supply of Reserve Currencies » , in Boorman J. T. and Icard A., *Reform of the International Monetary System, The Palais Royal Initiative*, Sage, 2011

- *Its surveillance should have a particular focus on the stability of exchange markets and the appropriatedness of the supply of liquidity and the needed multilateral instruments to facilitate unilateral balanced and sustainable growth.*
- *This system's central contingency instruments must be able to respond without delays to unexpected major disruptions.*
- *It must facilitate the orderly diversification of reserve currencies held by each of its members without generating tensions in international markets.*
- *These two last concerns underline the need for the development of a world reserve instrument, multilaterally managed, complementing those generated at the national level, and which could, through incremental steps, become a full fledged currency ;*
- *Last, the management of this world reserve instrument should be guided by the objective of Article VIII-7 of the articles of agreement of the IMF, to make the SDR the principal reserve asset in the international monetary system, and the aim of providing a globalised world with a sound and universal monetary instrument, providing the system with an unquestionable anchor for stability* »

## The RTI Working Party on the SDR.

The PRI Report had remained relatively succinct regarding the role of the SDR but had recognised that the subject deserved further discussion. This was the reason why RTI launched in 2013 an SDR Working Party under the chairmanship of André Icard, former Deputy General Manager of the BIS. The report of the Working Party[11] was completed in the course of 2014 and presented at a colloquium organised by RTI and the Compagnia San Paolo in November 2014 in Turin.

In its first part, the report pointed to the systemic reason why it was so difficult to regulate global liquidity. It recalled that, in the last published version of his analysis of the asymmetries generated by the dollar-system, Triffin foresaw « the development of a vicious circle of disequilibria he named a « built-in-destabilizer », which affected both the reserve currency country and the other economies, and relied upon two intertwined mechanical channels : first the weakening of the external constraint on the issuer of the reserve currency, which tended to exacerbate its macroeconomic imbalances by pushing down its saving rate and, second, the transmission to the rest of the world of the monetary conditions prevailing in the reserve currency country. Other creditor central banks, concerned by a growing instability risk and sometimes also motivated by mercantilist objectives, were inclined to pile up additional reserves, resist appreciation of their currencies, and re-inject in reserve currency assets their excess holdings, lowering these assets' yields, especially at the long end of the curve. As a result, global liquidity conditions could not be adequately regulated, reinforcing the cyclicality of global economic trends, and applying a brake on the macroeconomic and structural adjustments in both deficit and surplus countries ».

Given the policy spillovers and external liquidity effects of the current dollar-based system, the Working Party made a case for « *examining the way to internalize them either in a*

[11] Robert Triffin International Association (RTI), *Using the Special Drawing Rights (SDR) as a lever to reform the international monetary system,* Centre for the Study of Federalism, 2014

*systemic/centralized fashion, or at the least in a cooperative one. At the national level, economists long ago agreed on the need to control spillovers generated by the banking system's money creation through a « central bank » charged with regulating bank liquidity by issuing or destroying its own liabilities used as the national currency. At the global level, this very same need should logically lead to the creation of a single mrltilateral central bank, which could regulate the global liquidity needed for a globalized economy in a rational way* »

However, the Report admitted « *that the first-best solution of global liquidity conditions being determined by a world central bank is out of reach in today's world* » and that « *one must therefore search for a second-best solution that is compatible with existing constraints and which could ultimately evolve toward the first-best solution* ». To make the best out of the current system, it focused on using the SDR as a lever to reform the IMS. The SDR was indeed originally conceived in the 1960s as an official reserve asset that would be both supplement to and substitute for the US dollar. Indeed, the Committee of the Twenty that met from 1972 to 1974 visualized this asset becoming the basic asset of the IMS. However this vision was not realized – the SDR represented in 2014 only 4% of total reserves - because nations pursued their individual short-run self-interest, which resulted in the continuation of the reserve currency system, with all its disadvantages.

Nevertheless, according to the report, the scope existed for a wider use of the SDRs. With foreign exchange reserves deriving mostly from current account desiquilibria or transnational capital flows and with IMF quotas that could not be adjusted easily, the only element of global liquidity that, in practice, could be subject to collective decision making – as was the case in 2009 in the aftermath of the London G20 Summit – was SDR holdings. If one considered – as the Report did – that the development of permanent financing mechanims, akin to a global Lender of Last Resort (LOLR), was necessary, the SDRs constituted the natural IMF instrument for this purpose and should play a much larger financial role than today. Such an approach would have the additional advantage of providing, at least to some degree, an effective alternative to further precautionary reserve accumulation.

The report recognized, however, that the negligible share of SDRs in official reserves and the absence of any private market were handicaps. To overcome these handicaps, the Report proposed a number of reforms aimed at enhancing the role of official SDRs and at promoting a private SDR market.

## Landau's Report on Global Liquidity and subsequent BIS work on this subject

In May 2011, following a suggestion of the Palais Royal Group and a request from Central Bank Governors, the Committee on the Global Financial System (CGFS) established an Ad-hoc Group to investigate the measurement, drivers and policy implications of global liquidity. According to Mark Carney, Chairman of the CGFS, *« issues related to global liquidity had become a major focus of international policy, necessitating work both on indicators that can help track global liquidity developments and on appropriate measures to address them* ». The Group was chaired by Jean-Pierre Landau, Deputy Governor of Banque de France. The

report[12] was finalised in September 2011 and presented to central bank Governors at the Global Economy Meeting in the same month, where it received endorsement for wider circulation. It was circulated to the G20 for their meetings in October and in November 2011.

The report starts from the view that « *global liquidity and its drivers are of major importance for international financial stability* » but that « *the concept of global liquidity continues to be used in a variety of ways and this ambiguity can lead to unfounded and potentially destabilising policy initiatives* »

This report cast important new light, emphasizing that the nature of the problem has dramatically changed since the 1970s. During the early decades (1960-1980), the volume of global liquidity continued to be determined mainly by fluctuations in the U.S. balance of payments. Increasingly, thereafter, private capital flows in international financial markets took over from the US balance of payments, becoming the main driver of global liquidity creation, beyond the scope of any regulation. Thus, the world today is subject to two volatile sources of fluctuating liquidity, namely the US balance of payments and private capital movements.

The Landau report analyses separately the official and the private components of global liquidity. The official component can be defined as "*the funding that is unconditionally available to settle claims through monetary authorities*. *It can be accessed through various instruments, such as foreign exchange reserves and swap lines between central banks. Ultimately, only central banks can create official liquidity*. » This restrictive view reflects the current constraints under which the IMF operates but the notion that IMF programmes and SDRs are only vehicles for mobilising official liquidity is a topic that could be discussed by the Working Party, having in mind that one day they could become tools for liquidity creation.

The other concept analysed in Landau's report is private (or private sector) liquidity, which is created to a large degree through cross-border operations of banks and other financial institutions. These two concepts both capture one common element, namely the ease of financing.

The report states that *« Quantitatively, private liquidity dominates official liquidity. Most global liquidity today is privately created through cross border operations by both bank and non-bank financial institutions. From a financial stability perspective, understanding the determinants of private liquidity is of particular importance. Private global liquidity displays both an increasing trend and a strong cyclical component. The increasing trend is a result of deeper financial integration between countries and financial innovation (spurred, among other things, by regulatory changes). But private global liquidity is also highly cyclical because it is driven by divergences in growth rates, monetary policies and, above all, risk appetite.*

*Private liquidity can give rise to international spillovers as many financial institutions provide liquidity both domestically and in other countries. The creation and destruction of private*

[12] Committee on the Global Financial System, CGFS Papers N°45, *Global liquidity – concept, measurement and policy implications*, November 2011, BIS

*liquidity is closely related to leveraging and deleveraging by private institutions. Hence, globally, private liquidity is linked to the dynamics of gross international capital flows, including cross-border banking or portfolio movements. This international component of liquidity can be a potential source of instability, because of its own dynamics or because it amplifies cyclical movements in domestic financial conditions and intensifies domestic imbalances. »*

The report recognises that there is interaction between official and private liquidity : *« In normal times and particularly in boom periods, the supply of global liquidity will be largely determined by international banks (either directly or through financial markets). In times of stress, the supply of global liquidity will depend crucially on the private sector's access to official liquidity*. »

When it comes to quantification, « *Global liquidity, and especially its private component, is best assessed on the basis of a combination of both price and quantity measures. Price indicators tend to provide information about the conditions at which liquidity is provided, while quantity measures capture how far such conditions translate into the build-up of potential risks. »*

Last but not least, the report proposes policy responses to global liquidity, calling for a consistent framework that considers all phases of global liquidity cycles, countering both surges and shortages. According to the report's executive summary *« Such a framework should rest on three lines of defence :*

*The first line of defence is the prevention of excessive liquidity surges through strengthened regulatory frameworks. The current reform agenda clearly goes in the right direction. It will limit the probability and frequency of liquidity disruptions by increasing the resilience of global financial intermediation. It will also dampen the amplitude of global liquidity cycles by limiting the intrinsic procyclicality of our financial systems.*

*Domestic policies are a second line of defence. They include, inter alia, macroprudential measures and central bank liquidity provision. One issue is the extent to which individual countries will want to insure themselves against liquidity shocks by building sufficiently large stocks of foreign reserves. The accumulation of reserves, which has been on an increasing trend, entails some negative externalities as well as operational challenges. The report notes, however, the complexity of drivers behind reserve accumulation, especially relating to the so-called precautionary motive. There are many factors at play: insuring against a run on domestic financial systems; providing foreign currency liquidity to domestic corporates and financial institutions; and influencing market sentiment and risk premia. These same factors may also explain why there is a reluctance to use reserves in times of stress (the so-called fear of losing reserves). This raises the question of whether and to what extent other sources of foreign currency liquidity could substitute for the accumulation of precautionary reserves, thus helping to limit some of the costs and externalities imposed by large foreign exchange reserves holdings.*

*Cooperative measures for the provision of liquidity in crisis situations provide the third line of defence. There is a well known tradeoff between ex ante clarity and the risk of moral hazard.*

*Existing IMF precautionary facilities have worked well, but it is important to preserve the current level of conditionality. Swap arrangements between central banks have played a crucial role in the crisis, which has shown that truly global liquidity shocks necessitate direct interventions in amounts large enough to break downward liquidity spirals. Central banks' ability to elastically supply potentially very sizeable amounts of foreign currency liquidity at short notice can thus successfully assure credibility among financial market participants. This advantage has to be balanced, however, by the necessity of avoiding moral hazard, preserving monetary policy autonomy, and controlling financial risks for the liquidity-providing central bank.* »

Written under the auspices of the BIS, the report concludes that « *central banks have a key role to play in all these policy areas. The established cooperative Basel process ensures that central banks understand each others' reaction functions and economic outlooks. This provides the context within which they can set their own policies in a manner consistent with their domestic policy principles and financial and price stability objectives. Working through this process, central banks remain well placed to address future surges and shortages in global liquidity.* » The report, however, falls short of addressing the more systemic role that could be played by the IMF in the management of global liquidity. Of course, this would require amendments to the IMF Articles of Agreement, around which, under current circumstances, a consensus would be very difficult to reach.

Further to this report, the BIS publishes and comments periodically statistics on global liquidity and its evolution.

In February 2013, the BIS published a Working Paper (N° 402) *Understanding Global Liquidity* by Sandra Eickmer, Leonardo Gambacorta and Boris Hofmann[13]. This paper explored the concept of global liquidity through the lens of a factor model using a large set of financial and macroeconomic variables from 24 advanced and emerging market economies for the period 1995-2011. Its main findings are that global liquidity, defined as the commonality in financial dynamics across countries that is not explained by global macroeconomic factors, cannot be summarised in a single indicator. In fact, global liquidity conditions are largely driven by three common factors which can be identied as global monetary policy, global credit supply and global credit demand. The analysis of the patterns of the structural global liquidity factors and of the factors contributions to the development of key liquidity indicators offers a number of interesting insights. Three points stand out. First, global credit supply conditions loosened markedly between the mid-1990s and 2007. This suggests that financial deregulation and globalisation over this period fostered a sustained increase in liquidity supply that ended with the global financial crisis. Second, the run-up to the financial crisis was primarily associated with loose credit supply conditions, but accommodative monetary conditions, strong credit demand at a later stage of the pre-crisis boom and also global macroeconomic factors played a role. The global build-up of financial imbalances ahead of the crisis was thus not caused by a single driver but rather by the combined effects of a number of different forces. Third, since the outbreak of the global financial crisis in

[13] Eickmer S., Gambacorta L. and Hofmann B ; , *Understanting Global Liquidity,* BIS Working Paper 402, February 2013

2008, the global monetary policy stance has been accommodative, while credit supply has been tight and credit demand has been weak. This implies that accommodative "official" liquidity conditions have been countervailing the adverse effects of weak "private" liquidity conditions on financial dynamics over this period, though without being able to fully offset them.

A subsequent BIS Working Paper (N°458) of August 2014, authored by Valentina Bruno and Hyun Song Shin, addresses more specifically the issue of «Cross-border banking and global liquidity » [14]The authors formulate a model of international banking system where global banks interact with local banks. According to the paper's abstract : « *The solution highlights the bank leverage cycle as the determinant of the transmission of financial conditions across borders through banking sector capital flows. A distinctive prediction of the model is that local currency appreciation is associated with higher leverage of the banking sector, thereby providing a conceptual bridge between exchange rates and financial stability »*

A more refined analysis is provided in a new BIS Working Paper ( No 644), dated June 2017, on « The shifting drivers of global liquidity »[15] by Stefan Avdjiiev, Leonardo Gambacorta, Linda S. Goldberg and Stefano Schiaffi. The shifts being analysed in this paper are those in the composition and drivers of international bank lending and international bond issuance. The paper shows that sensitivity of both types of flows to US monetary policy rose substantially in the immediate aftermath of the Global Financial Crisis, paked around the time of the 2013 Fed « taper tantrum », and then partially reverted towards pre-crisis levels. Conversely, the responsiveness of international bank lending to global risk conditions declined considerably post-crisis and became similar to that of international debt securities. The paper highlights also the sensitivity of capital flows to the degree of commonality of cycles and stance of monetary policy between the US and other advanced economies. An important conclusion is that *« policies and prudential instruments that reinforced lending banks' capitalization and stable funding levels reduced the volatility of international lending flows »*

The issue of the management of liquidity shortages, which straddle national borders, by the central banking community was adressed by the Nakaso Report for the CGFS on « Designing frameworks for central bank liquidity assistance » (April 2017). This report focuses on cross-border dimensions of the central banks' liquidity support and spells out specific issues especially in the domains of cooperation, transparency and communication that have to be dealt with before the next crisis. The report also pleads for a better understanding of the implications attached to market based forms of financial intermediation which are likely to play a key role in future episodes of systemic stress. Many of the issues identified remain unsolved.

[14] Bruno, V. and Song Shin H. *Cross-border banking and global liquidity,* BIS Working Paper No 458, August 2014
[15] Avdjiev S., Gambacorta L. , Goldberg L.S. and Schiaffi S. *The shifting drivers of global liquidity*, BIS Working Paper, no 644, June 2017

The most recent assessment by the BIS of global liquidity conditions is provided in the article « Global liquidity : changing instrument and currency patterns »[16] by Inaki Aldasoro and Torsten Ehlers, published in the September 2018 edition of the BIS Quaterly Review. The article shows that « *International (cross-border and foreign currency) credit, a key indicator of global liquidity, has continued to expand in recent years to 38% of global GDP. This growth has been driven by international debt securities issuance, while the role of banks has diminished – both as lenders and investors in debt securities. The aggregate trend has been more pronounced for advanced economy than emerging market borrowers. For individual countries, however, the growth of bank loans and that of debt securities have tended to more in tandem, highlighting the cyclical nature of global liquidity. »* Attention is also driven to the changing currency composition of global liquidity : « *The US dollar has become even more dominant as an international funding currency – in particular for emerging market borrowers. However, dollar exposures in emerging market economies vary substantially across countries and sectors ».*

Last but not least, the adequacy of global liquidity has been a recurrent policy issue about which BIS Senior management has expressed concern in recent years. In his IMFS Distinguished Lecture at Goethe University in Frankfurt on 5 March 2014, Jaime Caruana,[17] BIS General Manager, addressed the theme of « Global Liquidity : where it stands, and why it matters » . « *The analysis of global liquidity »,* Mr. Caruana said*, « is important for a number of reasons. First, the interaction between financial booms and busts – what we call the financial cyle – and the real economy deserves more attention than it has received in the past. Even today theseimplications are not fully understood and internalised in our thinking and models. Global liquidity excesses can contribute to the endogenous build-up of vulnerabilities, liquidity shortages can have important implications for stability and growth. A second underestimated factor is the growing impact of global conditions on domestic economies and financial systems. In an interconnected world, global conditions – the global financial cycle – have a growing economic impact on domestic economic conditions. Policy makers need to take these feedbacks effects into consideration. More work is needed to internalise all these interdependencies and spillovers in a consistent framework ».* The key message of the lecture was « *That, notwithstanding efforts in some parts of the worldto begin normalising policy, global liquidity conditions remain accommodative. We need to be aware of the new risks in this new phase of global liquidity. At some point, more normal conditions will return and should be welcomed. But both policymakers and the private sector will need to be prepared for the adjustment. This means watching out for vulnerabilities that may have built up while conditions were accommodative. It also means taking action to build resilience in the financial system… »*

[16] Aldasoro I. and Ehlers T., Global liquidity : changing instrument and currency patterns, *BIS Quaterly Review, September 2018*

[17] Caruana J., *Global liquidity : where it stands, and why it matters,* Speech , IMFS Distinguished Lecture at Goethe University, Frankfurt, 5 March 2014

In his address to the IMF conference on Rethinking Macroeconomic Policy III on April 15-16 2015 in Washington, Jaime Caruana[18] called upon all the participants to keep an eye on global liquidity and to go beyond strictly national perspectives. « *This »,* he said, « *takes more than just keeping one's own house in order ; it will also require contributing to keeping the neighboorhood in order… An array of possibilities then present itself in terms of the depth of international policy cooperation, ranging from extended local rules to new global rules of the game ».*

Jaime Caruana[19] came a last time back to the topic of global liquidity in his speech in Reykjavik on 14 September 2017 at the conference on « The uncertain future of global economic integration », jointly organised by the Central Bank of Iceland and the Reinventing Bretton Wood Committee. In his keynote speech on the theme « International arrangements for a resilient global economy », he pointed to the role of international cooperation in the management of the global financial cycle. *« Keeping one's house in order »,* he reaffirmed, « *is not enough. Policy makers should also give more weight to international interactions of domestic policies. Multilateralism is key for delivering the best outcomes in this respect. »* He particularly pleaded for a higher level of cooperation among major central banks to reach a common understanding of how various spillover and spillback channels worked and to internalise them better in the formulation of their policies.

## Managing Global Liquidity as a Global Public Good : Michel Camdessus and Anoop Singh's proposals

In a contribution *Reforming the IMS – A sequenced agenda*[20] prepared in 2014 for the Emerging Markets Forum, Michel Camdessus, former General Manager of the IMF, and Anoop Singh, Adjunct Professor at Georgetown University, former Director, Western Hemisphere and Asia Pacific, IMF, anf former Managing Director and Head of Regulatory Affairs, Asia Pacific, JP Morgan, stress the urgency of reconsidering « how the international policy framework monitors, regulates, and manages global liquidity » in the light of the ongoing shift of global activity and finance from advanced economies to emerging and developing economies and the increasing uncertainties in financial markets. In their view, these developments confirm more than ever the importance of managing global liquidity as a global public good.

Besides a number of specific reforms aimed at tayloring the IMF's methods and instruments to today's problems and at strengthening its legitimacy and governance, Michel Camdessus and Anoop Singh propose an interesting mechanism to regulate global liquidity, involving two types of measures :

[18] Caruana J. Address to the IMF Conference on Rethinking Macroeconomic Policy III, Washington, April 15-16, 2015

[19] Caruana J. *International arrangements for a resilient global economy,* Keynote speech at the Conference on « The uncertain future of global economic integration », jointly organised by the Central Bank of Iceland and the Reinventing Bretto Woods Committee, Reykjavik, 14 September 2017

[20] Camdessus M. and Singh A., *Reforming the IMS – A sequenced Agenda,* Emerging Markets Forum, 2014

- The creation of a high-level group charged with overseeing global liquidity. A group of central bank governors – comprising the governors of the central banks whose currencies are included into the SDR - should be invited to report periodically – every six months, for example – to the IMF's International Monetary and Financial Committee (IMFC). This Committee should become the ministerial organ of the G20 and bear ultimate responsibility, inter alia, for calibrating global liquidity.
- The SDR should be thoroughly overhauled and able to fulfill the role of the regulatory instrument originally assigned to it : the managers of the system should have the power to use it much more flexibly as needed by the global liquidity situation.

In a recent publication of the Reinventing Bretton Woods Committee, *The 10 Years after, the end of the familiar… reflections on the great financial economic crisis* (2018), Anoop Signh signs again an important contribution *Managing Global Liquidity, Reforming the International Monetary System*[21], in which he regrets that the G20 , despite having promoted an array of useful banking and financial reforms, stopped short of addressing the fundamental problem of calibrating global liquidity to the needs of the global economy – the original design of the IMF mandate.

Once more, he shows how the risks to global liquidity have compounded with the explosive rise in gross external asset positions, largely created by cross-border operations of banks and other financial institutions that have sharply raised asset price correlations across all major asset classes with potential contagion effects. He sees evidence of higher volatility of financial markets given the changing nature of financial globalization, the potential reduction in the liquidity available from banks (that have traditionally been the « shock absorbers ») and the rise of multiple players with liquidity mismatches and counterparty risks. Furthermore, « *near term factors reinforce the importance of reforms to better manage global liquidity. These include new threats to financial stability that are emerging from elevated global uncertainties – especially given debt buildups in many advanced couintries and emerging markets – that could spark a sudden repricing of market risks and pressures on liquidity, as the Fed continues to tighten interest rates. Uncertainties on the future of US participation in the international financial regulatory system could also quickly endanger global financial stability if they materialize. It is worrying that the macroeconomic public buffers to deal with such volatility pressures and their contagion, are now more limited for political as well as crisis legacy reasons ».*

Anoop Singh reviews the increasing number of bilateral and regional central bank swap lines but regrets that they have stayed away from developing an institutionalized global swap network, that would be based on global assessments of liquidity conditions and linked to IMF qualification criteria. At the same time, delays in implementing the G20 reforms since the global financial crisis have likely weakened the IMF, leaving it open to more protectionist sentiments in the US. This leads Anoop Singh to reiterate the recommendations he made previously , together with Michel Camdessus, towards creating, under IMF auspices, a high-

[21] Anoop Singh, Managing Global liquidity, Reforming the International Monetary System, in Reinventing Bretton Woods Committee, *The 10 Years after, the end of the familiar … reflections on the great financial economic crisis,* Astana International Finance Centre, 2018

level group charged with better assessing inter-linkages and overseeing global liquidity and towards enhancing the role of the SDR making it the instrument enabling the IMF to create reserves and to act more as a lender-of-last-resort.

## IMF research work on the dynamics of liquidity and the impact of Unconventional Monetary Measures

Like the BIS, the IMF is doing research on global liquidy. In October 2012, Sally F. Chen , Philip Liu and Andrea M. Maechler published a Working Paper on *Exploring the Dynamics of Global Liquidity*[22]. The paper explores the concept of global liquidity, its measurement and macro-financial importance. The authors constructed two sets of indicators for global liquidity : a quantity series distinguishing between core and noncore liabilities of financial intermediaries and a corresponding price series. Using price and quantity indicators simultaneously, they found it possible to distinguish between shocks to the supply and demand for global liquidity, and to isolate their impact on the economy. Their results confirm that global liquidity conditions matter for economic and financial stability, and point to indicators whose regular monitoring could be valuable to policymakers.

In December 2015, another Working Paper by Y. Korniyenko and E. Loukoianova examined *The Impact of Unconventional Monetary Measures by the Systemic Four on Global Liquidity and Monetary Conditions*[23]. The paper starts from the fact that in recent years, the Federal Reserve, the Bank of Japan, the Bank of England and the European Central Bank have adopted unconventional monetary policy measures (UMPMs)—ranging from large scale purchases of public and private debt securities to direct lending to banks—designed to inter alia, repair the monetary transmission mechanism by ensuring depth and liquidity in financial markets and provide monetary accommodation at the zero lower bound of policy interest rates. One distinguishing feature of UMPMs, which has also been referred to as quantitative easing (QE), is that the central bank actively uses its balance sheet to influence market prices and conditions beyond the use of a short-term or “policy” interest rate. As a result of these policies, the balance sheets of the central banks implementing the UMPM programs expanded significantly over the period 2008–14. This has led to large injections of money into the economy through increased reserves (which, by a “money multiplier,” increased broad money), as well as introduction of negative interest rates for some policy instruments in some advanced countries.

With money and securities being imperfect substitutes, these programs resulted, according to the Working Paper, in portfolio rebalancing of assets of the United States, the United Kingdom, the Euro area, and Japan—the Systemic Four (S4) — banks and corporations, which in turn increased asset prices. Investors responded by acquiring more risky assets outside the S4 that became relatively more attractive compared with S4 government bonds and securities : capital outflows from the S4 rebounded leading to increased inflows and issuance of new securities in emerging market economies (EMEs).

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[22] Chen S.F., Liu P. and Maechler A.M., *Exploring the Dynamics of Global Liquidity*, IMF Paper, October 2012

[23] Korniyenko Y. and Loukoianova, *The Impact of Unconventional Monetary Measures by the Systemic Four on Global Liquidity and Monetary Conditions,* IMF Working Paper, December 2015

According to the Working Paper, the overall effect of the S4 UMPMs on the rest of the world (RoW) liquidity and monetary conditions is not yet clear, as positive trade and capital spillovers may likely be accompanied by increased macro-financial vulnerabilities. While empirical studies find evidence of significant spillovers of monetary easing in the S4 on the RoW through trade and finance channels, research on the impact of the S4 UMPMs on the RoW banks' balance sheets, liquidity, and money supply is still in an embryonic stage.

Indeed, the substitution of cross-border banking flows with portfolio flows of non-banks does raise new concerns about financial vulnerabilities. The growing role of non-financial corporations (NFCs) as de facto "financial intermediaries" may reduce the effectiveness of macroprudential policies and limit the ability of policy makers to respond to future shocks. Seen from a broader perspective, such UMPM programs might also lead to a loosening of fiscal discipline and shifts in the allocation of resources. In this context, the overall effect of the S4 UMPMs on the RoW is likely to be dependent on both the specific policy frameworks of affected countries and each UMPM program. Likewise, the affect of S4 UMPMs reversals on the RoW, i.e., monetary policy normalization, could also be varied.

Against this background, the Working Paper paper attempts to break new ground in empirically investigating UMPM spillovers on global liquidity and monetary conditions and financial sector balance sheets in other countries. In particular, it focuses its analysis on spillovers from S4 monetary policy easing (conventional and QE/UMPMs) on the RoW's monetary aggregates, banks' balance sheets (NFC deposits), and NFC securities issuances. It also assesses potential threats stemming from UMPMs unwinding to the RoW, a topic that has remained largely unexplored and which is a major gap in understanding of UMPM spillovers/leakages.

The authors find positive and statistically significant relationships between UMPM implementation and global liquidity and monetary conditions in terms of global NFC deposit growth (including China), banks' cross-border flows, and issuance of securities (particularly in foreign currency). They also find significant differences in the impact of the UMPMs implemented by individual S4 on broad money, NFC deposits, and securities issuance in EMEs.

## Fabrizio Saccomanni : excessive global indebtedness and the need for deleveraging

Fabrizio Saccomanni, former Minister of Finance of Italy and former Deputy Governor of Banca d'Italia, now Chairman of Unicredit, has supported RTI since its beginning and participated to several conferences it organised. He was also one of the 16 members of the G20 Group of Eminent Persons on Global Economic Governance, which submitted their report to the G20 Ministers of Finance ahead of the recent G20 Summit in Buenos Aires.

In a keynote speech[24] Fabrizio Saccomanni delivered at the conference of 3-4 October 2011 in Brussels, on the occasion of the 100th anniversary of Triffin's birth, he told the audience

[24] Saccomanni F., How to Deal with a Global Triffin Dilemma, Luncheon speech, 4 October 2011, in Koeune J ;-C. & Lamfalussy A. , *In Search of a New World Monetary Order,* Peter Lang, 2012

that the world was facing a « global Triffin dilemma » in which the excessive indebtedness of issuers of financial assets (and not just of reserve currencies as in the aerly version of the dilemma) was affecting the value of all those assets.

For him, the history of the international monetary system could be interpreted as an endless search for safe assets. When the link between the dollar and gold had been severed, the world had *de facto* delegated to financial markets the task of determining which assets could be considered safe and which not. The problem with this arrangement was that markets were fickle and could oscillate between one extreme, where all assets were safe, even junk bonds and others, and the opposite extreme, where there were virtually no safe assets, except a happy few, where every investor would like to place his or her money, irrespective of the yield. The age of financial globalisation had brought us to the verge of this second extreme as a result of excessive accumulation of debts by all economic agents. The market was telling us that this process had gone too far and that a « deleveraging » was now required by all debtors, public and private. He therefore recommended a sort of « truce », whereby market participants would grant the time required for an orderly deleveraging, in return for a credible commitment by national governments to pursue stability-oriented macroeconomic policies and to carry out a sensible reform of the current international monetary system. Such a truce could only be enforced in the G-20, which its leaders had elected to be the « *premier forum for international economic cooperation* ». A credible agenda would have to include :

- *« a strong multilateral surveillance procedure managed by the IMF and designed to adjust global payments imbalances and to contain the impact of the cross-border policy spillovers on the financial system ;*
- *the implementation of the financial regulation reform elaborated by the Financial Stability Board to strengthen the resilience of the banks and financial intermediaries and to discourage excessive risk taking ;and*
- *the commitment to establish a new multilateral reserve asset – hopefully with a more appealing name than the SDR – to become the « safe asset » that financial markets demand and that could be the anchor and the standard of a more stable international monetary system. »*

## Academic Work of Helene Rey and others on global liquidity

The essential role of international markets in determining global liquidity and the necessity of internalisation of the global spillovers of the centre's monetary policy are generally recognised in academic circles. Special reference should be made to the work of Hélène Rey, who in recent years was associated to the London School of Economics, the Center for Economic Policy Research (London) and the National Bureau of Economic Research (Washington) .

Already in a paper *Dilemma not Trilemma : the Global Financial Cycle and Monetary Policy Independence,*[25] , published in 2013, Hélène Rey demonstrates the existence of a global financial cycle in capital flows, asset prices and in credit growth. As explained in the paper's abstract, *« this cycle co-moves with the VIX, a measure of uncertainty and risk aversion of the markets. Assets markets in countries with more credit inflows are more sensitive to the global cycle. The global financial cycle is not aligned with countries' specific macroeconomic conditions. Symptons can go from benign to large asset prices bubbles and excess credit creation, which are among the best predictors of financial crises. A VAR analysis suggests that one of the determinants of the global financial cycle is monetary policy in the centre country, which affects leverage of global banks, capital flows and credit growth in the international financial system. Whenever capital is freely mobile, the global financial constrains national monetary policies regardless of the exchange rate regime. »*

This empirical finding contradicts the trilemma that has been postulated by Robert Mundell for the past few decades, namely that, with free capital mobility, independent monetary policies are feasible if and only if exchange rates are floating. The global financial cycle identified by Hélène Rey shows that the insulating properties of floating regimes have been overestimated and transforms the trilemma into a dilemma or an « irreconcilable duo » : independent monetary policies are possible if and only if the capital account is managed.

Therefore Hélène Rey raises the question : Should policy restrict capital mobility, given also that gains to international capital flows have proved elusive whether in calibrated models or in the data ? To avoid the disruption caused by large gross flows to asset markets and financial intermediation, she recommends a combination of : (a) targeted capital controls ; (b) acting on the transmission channel cyclically by limiting credit growth and leverage during the upturn of the cycle, using national macroprudential policies ; and (c) acting on the transmission channel structurally by imposing stricter limits on leverage for all financial intermediaries.

Hélène Rey further elaborates her views on this issue in the Andrew Crockett Memorial Lecture – *The Global Financial System, the Real Interest rate of interest and a long history of boom-bust cycles*[26] – she delivered on 3 July 2017, stating the following :

**«** *Other policies to deal with the Global Financial Cycle and the "dilemma" are to take actions directly aimed at the main source of concerns (excessive leverage and credit growth). We could*

*i)* *use micro and macro prudential tools and fiscal policy tools in a cyclical fashion to keep credit growth in check during upturns and favour credit creation during the downturns with a specific attention to the housing market; the counter-cyclical buffer is an example but symmetrical use requires that the buffer be loaded ex ante;*

[25] Rey H., *Dilemma not Trilemma : The Global Financial Cycle and Monetary Policy Independence,* London Business School, CEPR and NBER, August 2013

[26] Rey H ;, *The global financial system, the real interest rate of interest and a long history of boom and bust cycles,* Andrew Crockett Memorial Lecture, BIS, 3 July 2017

ii) *use prudential tools and fiscal tools to decrease structurally the elasticity of credit creation and leverage to changes in the cost of funds.*

iii) *use capital flow management tools to reinforce prudential instruments either cyclically or structurally.*

iv) *depending on the source of financial instability and institutional settings, consider use of capital management tools as a partial substitute for macro-prudential measures. »*

Finally the Andrew Crockett Lecture delivered by Hélène Rey touched upon the stability of the international monetary system and the possibility of being faced by a New Triffin Dilemma due to the shrinking of the economic size of the hegemon relative to the rest of the world. If that analysis is of merit then more thoughts should be given to the emergence of a multipolar international monetary system with China and Europe playing a more important role This could give further impetus to a number of initiatives aiming at developing euro-area safe assets, whether red/blue bonds. A more multipolar system would increase the supply of reserve assets and be stabilizing. But of course we cannot rule out that such a system would see an increased likelihood of large portfolio shifts and large volatility. In conclusion, Hélène Rey echoed Jaime Caruana 's call to keep an eye on global liquidity and to go beyond a strictly national perspective, quoting him, when he said at the 2015 IMF Conference on Rethinking Macroeconomic Policy ,"*This takes more than just keeping one's own house in order; it will also require contributing to keeping the neighbourhood in order.... An array of possibilities then presents itself in terms of the depth of international policy cooperation, ranging from extended local rules to new global rules of the game*."

## Views from Emerging Countries

RTI has established closed links with the Shanghai Development Resaearch Foundation (SDRF), headed by **Yide Qiao**. On July 12, 2013, the SDRF and the Boyuan Foundation held a « Forum on the Reform of the International Monetary System »[27]. In the discussions of the reform, numerous references were made to the Triffin dilemma and to the links between the defects in the IMS and the global financial crisis. It was recalled that in his paper titled *Thinking about the Reform of the International Monetary System,* which was published in March 2009, **Zhou Xiaochuan,** Governor of the People's Bank of China (PBC), had pointed out that it was the ideal objective of the international monetary system reform to create an international monetary reserve currency , which would be decoupled from a sovereign State but which would maintain long-term stability of the value of the currency. **Gongshen Pan**, Vice Governor of the PBC in charge of the PBC Research Bureau, expressed the hope that « *the IMF and the BIS will continue to improve the index system of measuring global liquidity and allowing various countries to manage cross-border capital flows through improvement of macro-prudential policy framework in order to reduce risks of flows and fluctuations of capital while also maintaining stable economic development »*

[27] The proceedings of this forum were published , Xiaoling Wu and Yide Qiao, Editors, *The Reform of the International Monetary System, Past, Present and Future,* 2014

On October 31 and November 1, 2015, the SDRF, together with RTI, the Reinventing Bretton Woods Committee, the PBC School of Finance of Tsinghua University and the Shanghai Advanced Institute of Finance, organised another conference in Shanghai on « Shift in Global Financial Governance and China's Financial Reform ». Among the many speakers, **Ma Jun**, Chief Economist, PBC Research Bureau, proposed again to put the reform of the IMS on top of the G20 agenda, having in mind the massive spillovers of the Federal Reserve policy on emerging countries markets. More specifically, how could such spillovers be internalized and monitored through enhanced IMF surveillance and how could safety nets such as the BRICS Contingency Reserve Assets Arrangement be set up to counter their effects ?

At the Conference organised by RTI on 3 and 4 October 2011 to celebrate the 100 anniversary of Robert Triffin[28], another representative of emerging markets, **Andrew Sheng**, President of the Fung Global Institute in Hong Kong, expressed the view that the post-1971 IMS was inherently unstable, that finance was serving its own interests and that the explosion in global liquidity between 2003 and 2009 was a reflection more of the global credit glut than of the global savings glut. He expressed concern that globalized finance had grown « out of sync » with the real economy, monetary policy had lost efficacy, foreign exchange reserves were small relative to the size of the market and the resources that the IMF could deploy were also insufficient. There was a « collective action trap » as no national government could measure shadow banking and offshore credit creation and therefore control global money created through these channels.

Another key figure from emerging markets, **Raghuram Rajan**, former Chief Economist of the IMF, former Governor of the Reserve Bank of India, now Professor at the Chicago Business School, complained in 2015 that « *capital flows, as a result of unconventional policies, have proved to be an headache for emerging market and industrial countries alike, creating a game of « musical crises » due to heir movement from one set of countries to another…. Can we do better than this, where we continuously push capital from one shore to another, because the next leg of this is another massive reserve build up by emerging markets ?* » [29]

One should recall also that Raghuram Rajan, invited to deliver the first Andrew Crockett Lacture in 2013[30], had offered one of the first academic's questioning of unconventional monetary policy and that , when he was Governor of the Reserve Bank of India, he wrote in 2016 an article on the « New rules of the monetary game »[31], in which he reviewed how policy spillovers had been analysed and urged those responsible for major funding currencies to work on rules that would help instill greater discipline in national policies. [32]

RTI established also contacts in Latin America, among others with **José Antonio Ocampo**, former Executive Secretary of the UN Economic Commission for Latin America and the Caribbean, former Minister of Finance and Public Credit of Columbia, and Professor at

[28] Koeune J.-C. and Lamfalussy A. , editors, In search of a New World Monetary Order, Peter Lang, 2012
[29] The Free Press Journal, October 23, 2015
[30] Rajan R. *A step in the dark : unconventional monetary policy after the crisis,* First Andrew Crockett Lecture, 23 June 2013.
[31] Rajan, R.New rules for the monetary game,*Project Syndicate,* 21 March 2016
[32] See reference to these contributions of Raghuram Rajan in the Reykjavik keynote speech of Jaime Caruana

Columbia University. Ocampo delivered the annual Triffin Lecture in Louvain-la-Neuve on May 11, 2016. In the lecture as well as in his subsequent book *Resetting the International Monetary (Non) System,* [33]José Antonio Ocampo analyses three major problems of the global reserve system : the asymmetric adjustment of deficit versus surplus countries ; the dependence on economic fluctuations and and the monetary policy of the main reserve issuing country (Triffin Dilemma), and the large demand for foreign exchange reserves by developing countries as self-insurance. It then proposes two reform routes : transforming it into a fully-fledged multi-currency reserve system, or placing at its centre the only truly global reserve asset, the IMF's SDRs. He argues that a complementary use of these two routes may be the only way forward. Under a mixed system, SDRs would become the source of financing for all IMF lending and satisfy in part the growing demand for reserves, but national currencies (regional in the case of the euro) would continue to be used as international means of payment and stores of value ».

## G20 Leaders' Declaration and Report of the G20 Eminent Persons Group on Global Financial Governance.

On 1 December 2018, the G20 Leaders adopted in Buenos Aires a declation on *Building consensus for fair and sustainable development.* Paragraph 23 of the declaration states «  We reaffirm our commitment to further strenthening the global financial safety net with a strong, quota-based, and adequately resourced IMF at its centre ». It took until the final hours of the Summit to get the US to reluctantly endorse this notion of « adequately resourced IMF at its centre ». Nevertheless the US agreed to this paragraph which states also « *We are committed to concluding the 15th General Review of Quotas including a new quota formula by the Spring Meetings and no later than the Annual Meetings of 2019* »[34]. On trade, the US finally agreed also to the language of paragraph 27 stating that «*International trade and investment are important engines of growth, productivity, innovation, job creation and development. We recognize the contribution that the multilateral trading system has made to that end. The system is currently falling short of its objectives and there is room for improvement. We therefore support the necessary reform of the WTO to improve its functioning. We will review progress at our next Summit* ».

[33] José Antonio Ocampo, *Resetting the International Monetary (Non) System, A study prepared by the United Nations University World Institute forc Development Economics Research (UNU-WIDER),* Oxford University Press, 2016

[34] Nevertheless, I am worried to read in the Financial Times of Friday 14 December 2018, p. 3, under the heading «US snubs IMF push to lift permanent reserves » that David Malpass, US Treasury under secretary for international affairs told on 13 December a congressional committee that the US was « opposed to changes in quotas ». Mr. Malpass argued that the IMF had ample firepower and that countries had developed alternative sources to draw on in a crisis. Ms. Lagarde, IMF Managing Director, had embarked on a drive to persuade the IMF's largest shareholders to back a rise in the organization's permanent firepower at the time of its annual meeting in Bali in October. Had the US supported the idea of quota rise, it would have probably triggered a positive response from other leading countries as well.  While the US appears to have shut the door on an increase in the IMF's permanent reserves, it appears to have left it open when it comes to US backing for alternative funding mechanisms, such as the renewal of the borrowing facility that pools temporary contributions to the IMF from members. But this is obviously much less reliable.

By launching in May 2017, under German chairmanship in 2016, the G20 Eminent Persons Group on Global Financial Governance, the G20 had raised hope that the international community to wake up to the need for an ambitious overhaul of global monetary and financial governance, addressing among others the management of global liquidity. The group, chaired by Tharman Shanmugaratnam, Deputy Prime Minister of Singapore, and comprising 16 highly experienced personalities, had in its terms of reference « *to review current and possible future challenges and opportunities facing the international financial and monetary systems, and the current state of the global financial architecture and governance* » and *« to recommend practical reforms to improve the functioning of the global financial architecture and governance so as to promote economic stability and sustainable growth ; and to discuss how the G20 could provide continued leadership and support for these goals* ». The G20 Eminent Persons Group submitted its final report to the G20 Finance Ministers and Central Bankers at the Bali Annual Meeting of the IMF on 15 October 2018. The G20 Leader's Declaration in its paragraph 24 « welcomed » this final report, without any elaboration.

What does this report say ? Its second section on « Securing the benefits of interconnected financial markets : reforms for global financial resilience » is the section of greatest interest for RTI. This section starts by recognizing that « *the international monetary and financial system (IMFS) has been strenthened in important respects since the crisis, especially through more robust prudential regulations and standards. But the system still has features that lead to crises occurring too often - in individual countries or in groups of similar countries through contagion, or globally* ». Unfortunately, there is no reference here to the built-in destabilizer of the present non monetary system, so often denouced in the framework of the Palais Royal Initiative and under the Triffin 21 Initiative. The report talks about « *reforms that are needed to make it possible for developing countries to finance sustainable current account deficits, where they are fundamentally needed at their stage of development, without the recurring bouts of instability that set back growth* » but does not include in these reforms anything that would address the fundamental flaw in the IMFS since the collapse of the Bretton Woods system. Nevertheless interesting but in our view insufficient reforms are proposed in terms of *« repairing and strengthening three interdependent pillars of the system* » :

a) Getting the benefits of international capital flows without the risks arising from excessive market volatility : the reports talks here about policy spillovers and recommends to move from the current policy thinking, generally shaped by whether one sits in sending or receiving countries, to *« a rules-based international framework, drawing on a comprehensive and evolving evidence base* ». Beyond the deepening of domestic financial markets, this implies a stronger involvement of the IMF in the assessments of receiving countries capital flows at risk and of push factors' and possible reversal of flows from sending countries. The report sees the IMF developing such a policy framework with inputs from national authorities and the BIS. The extension of IMF's spillover work should be integrated into the Article IV consultations of key systemic countries. Last but not least, the report recommends the establishment of a standing IMF facility for temporary liquidity support in the event of global liquidity shocks, as part of the package that enables countries to benefit from openness to capital flows.
b) Strengthening risk surveillance to avoid the next major crisis. The group aknowledges that nobody will know where the next crisis will start but that it will become a full blown crisis, with broader consequences, when the international community will not be prepared for it and that, despite progress since the 2007-2008 crisis, risk surveillance is

still too diffused. It proposes to integrate the risk surveillance efforts of the IMF, the FSB and the BIS in a coherent global risk map, which should be used to facilitate regular discussion of policy actions to pre-empt crises. Here again, the report does not address what, in RTI's view, are the ultimate causes of systemic instability. At least the authors state that in this endeavour, they should also *« look out for contrarian views, including those from the non-official sector* ». RTI could probably qualify for that category of providers of contrarian views.

c) Stitching together the various layers of global financial safety net (GFSN) to achieve scale and predictability before the next crisis. Here the group comes up with three interesting proposals but unfortunately could not agree on the more ambitious fourth one. Here there are :
   - Ensure an adequately-resourced global layer in the IMF through timely conclusion of quota reviews : the IMFC has called on the IMF Executive Board to work expeditiously towards completion of the 15th General Review of Quotas by the spring meetings of 2019 and no later than the annual meetings of 2019.
   - The IMF must work with the Regional Financial Arrangements (RFAs) to enable consistent actions during a crisis so as to achieve the necessary scale and global impact
   - Put in place a standing global liquidity facility, drawing on IMF permanent resources to strengthen countries' ability to withstand global liquidity shocks and avoid deeper crises. ; also the use a country's qualification for the IMF's liquidity facility in considering activation of RFA support.
   - Enable the IMF to rapidly mobilize additional resources in large and severe global crises : this is the proposal on which the EPG failed to reach a consensus and on which the report is particularly disappointing. The reports aknowledges that « there is a critical need to plug the gap in the GFSN with regard to future crises of a systemic « tail risk » nature and that this requires exploring the possible temporary mechanisms through which the international community could rapidly access significant amount of liquidity to ensure or restore financial stability. It aknowledges also that there is no guarantee that, in the case of a new global financial crisis, actions such as the US dollar 500 billion liquidity swaps deployed through the US Federal Reserve in 2008-2009 and/or the US dollar 450 billion pledged by a significant group of countries to temporarily augment IMF resources could be repeated in the case of a new crisis. Other possible options for IMF funding in large and severe global crises are listed in Annex 5 of the report, **including on-lending of unused SDRs from member country savings, market borrowing by the IMF,** replenishing and expanding the NAB, but, according to the group, these solutions « face governance and policy challenges, on which there are differing views. These must first be resolved through a process of consensus building. The EPG is hence not proposing a solution for endorsement at this stage ». What I find particularly puzzling is that the report does not even mention among the options a significant SDR allocation as was decided by the IMF in 2009. In the entire report, there not even a single reference to any of the 18 suggestions put forward by the Palais Royal Initiative in 2011.

## Conclusion

Even, if the concept of global liquidity is now better understood and if a statistical background is available, little progress has been made on the crucial problem of the management of global liquidity. In addition, the network provided by the various safety nets of the IMF and regional institutions is too fragmented. It is also too small to provide at very short notice all the liquidity that could be needed in case of financial stress. It is amazing that

at official level there is such a timidity in questioning the systemic aspects of the ways international liquidity behaves and is (or is not) managed. This explains that neither the call for making the IMF the global lender of last resort expressed by the PRI report, nor the recommendations of the RTI Working Party on SDRs, nor the expert views emanating from academic circles and/or emerging countries have ever been taken seriously in consideration.

Recently, members of the G20 Eminent Persons Group, unfortunately without reaching a full consensus on the matter, proposed, in case of need, to mobilise unused SDRs from Member Country savings and to allow market borrowing by the IMF ; these proposals, if adopted, would help but they look too narrow in scope and remain subject to consensus building.

There is perhaps, nevertheless, room for a new intiative, bringing together independent economic and financial experts, with the support of the BIS, especially using its methodology, to reopen the issue in a dispassionate way and to bring one step further the assessment of trends in global liquidity, including its currency composition, its adequacy as regards the need for both growth and systemic stability and the search for the appropriate approach and tools to the management of liquidity at the international level, with the objective of formulating recommendations for a more rational collective management of liquidity as a global common good.

**Bernard Snoy, Chairman RTI**

## Elements of a bibliography

Camdessus, M., Lamfalussy, A. and Padoa-Schioppa, T. 2011. *Reform of the international Monetary System: A cooperative approach for the Twenty first Century (The Palais Royal Report)* and Boorman,J and Icard,A. 2011 *Reform of the International Monetary System: The Palais Royal initiative* (Washington D.C. Sage Publications).

Camdessus, M. and Singh, A., 2016, *Reforming the international monetary system – A sequenced agenda,* Emerging Markets Forum Global Report

BIS- CGFS papers N°45 Nov. 2011 *"Global Liquidity-Concept, Measurement and Policy implications"* (Landau Report)

BIS Working papers N°402 January 2013. Eickmeier, S.; Gambacorta, L.; Hofmann,B. *"Understanding Global Liquidity"*

BIS Working Paper n° 458, August 2014 , Bruno, V. and Song Shin H. *Cross-border banking and global liquidity*

BIS Working Paper N° 644, June 2017, Avdjiev S., Gambacorta L. , Goldberg L.S. and Schiaffi S. *The shifting drivers of global liquidity*,

Caruana J. *"Global liquidity where it stands and why it matters "*Frankfurt Mars 2014, Address to the IMF Conference on Rethinking Macroeconomic Policy III, Washington, April 15-16, 2015 and *"International arrangements for a resilient global economy"* Reykjavik Sept. 2017

G20 Leaders' Declaration, 2018, *Building consensus for fair and sustainable development*

IMF Working paper WP/12/246 Chen, S., Liu ,Ph., Maechler, A. and al. "*Exploring the dynamics of Global Liquidity"*
IMF Working Papers N°15/287 December 2015 Korniyenko, Y and Loukoianova , E *"The Impact of Unconventional Monetary Measures by the Systemic Four on Global liquidity and Monetary Conditions*

Koeune J.-C. & Lamfalussy A. , Editors, *In search of a new World Monetary Order*, Peter Lang, 2012

Ocampo, *Resetting the International Monetary (Non) System, Oxford University Press, 2017*Padoa-Schioppa, T. , 2010, *The ghost of bancor : the economic crisis and global monetary disorder,* Triffin International Foundation, Centre for Sudies on Federalism

Padoa-Schioppa, T. ,*The ghost of Bancor : the economic crisis and global monetary disorder,* Louvain-la-Neuve, 25 February 2010, Centre for Studies on Federalism

Rajan R. *A step in the dark : unconventional monetary policy after the crisis,* First Andrew Crockett Lecture, 23 June 2013, and New rules for the monetary game, *Project Syndicate,* 21 March 2016

Report of the G20 Eminent Persons Group on Global Financial Governance, 2018, *Making the Global Financial System Work for All.*

Rey H., *Dilemma not Trilemma : The Global Financial Cycle and Monetary Policy Independence,* London Business School, CEPR and NBER, August 2013, and *The global financial system, the real interest rate of interest and a long history of boom and bust cycles,* Andrew Crockett Memorial Lecture, BIS, 3 July 2017

RTI 2014 *"Us ing the Special Drawing Rights as a lever to reform the International Monetary System*".

Singh, A. 2018, Managing Global Liquidity, Reforming the International Monetary System, in Reinventing Bretton Woods Committee, *The 10 Years After, the end of the familiar… reflections on the great financial economic crisis,* Astana International Financial Centre

Triffin, R. 1946, "National Central Banking and the International Economy", *Review of Economic Studies,* vol.XIV, n.36, 1946-1947
Triffin, R. 1957, *Europe and the money muddle.* New Haven, Yale University Press

Triffin, R. 1960, *Gold and the Dollar Crisis.The Future of Convertibility,* New Haven, Yale University Press

Xiaoling Wu and Yide Qiao, Editors, The Reform of the International Monetary System, Past, Present and Future, Shanghai Development Research Foundation, 2014