

## DOES THE INTERNATIONAL MONETARY FUND HAVE SUFFICIENT FINANCIAL RESOURCES?

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### Introduction

Since 2009, in response to the global financial crisis, the IMF has made fundamental changes in all the main aspects of its activities (governance, surveillance and lending policies, and institutional culture). These have been accompanied by a notable increase in the IMF's financial resources, driven by the G20, with a quadrupling of resources between 2008 and 2013, to nearly one trillion Special Drawing Rights (SDRs), approximately equivalent to USD 1.5 trillion.<sup>2</sup>

The intensity and scope of the global crisis, which spread to economies with developed financial systems and high levels of borrowing, made a sharp increase in the IMF's resources essential. This increase has been implemented in a number of steps, using various financing sources and instruments, a process that will be completed when the United States ratifies the quota reform approved in 2010 (the 14th review), which should have entered into force already. However, the debate regarding the size of the IMF's resources and their composition, in terms of instrument type and the country allocation, remains open. As a result of the approved decisions, a large proportion of the IMF's resources will be borrowed funds (rather than own resources, i.e. quotas), and a significant percentage will be temporary. In addition, the composition and allocation of resources have implications for governance and voting power within the institution. The G20 has already resolved to carry out a further quota review (the 15th), which was due to be completed in January 2014, but has been delayed until the 2010 reform is finally approved.

This article describes how the IMF's resources have evolved following the financial crisis, in terms of volume and composition, and the main aspects of the debate that remains open regarding the size of the IMF, a debate that is linked to the role this institution should perform in the management and prevention of future crises. The first aspect to be considered is sufficiency, i.e. the IMF needs to have sufficient resources to fulfil its mission, contributing to the stability of the international monetary system and to the maintenance of external and internal balance in its member countries. Two other relevant aspects are neutrality (i.e. whether the volume of the IMF's resources minimises the problems of moral hazard, without encouraging risky behaviour by potential international borrowers and investors) and flexibility and speed in mobilising resources. The assessment of these aspects (sufficiency, neutrality and flexibility) is sometimes based on conflicting considerations, so that there is no unequivocal solution to the problem of the size of the IMF, although flexibility is always a good palliative for uncertainty.

### Volume and composition of resources

Given the global nature of the financial crisis that broke out in 2007-2008, the coordination of the economic policy measures adopted in its aftermath at national level and the availability of sufficient resources for crisis management at the global level were paramount. The IMF, an institution set up and designed precisely to safeguard global stability, has played a decisive role in the policies drawn up, under G20 guidance, for exit from the

<sup>1</sup> This article is based on the report of the IRC-TF (2013), in which both authors participated, and on Moreno (2013).

<sup>2</sup> At current exchange rates, 1 SDR is equivalent to 1.5 US dollars.

crisis. For this purpose, the IMF's resources have been increased in successive rounds since 2009. The balance of the General Resources Account (GRA)<sup>3</sup> has reached practically SDR 1 trillion,<sup>4</sup> with around SDR 660 billion of quasi-permanent own resources and a further SDR 330 billion of temporary resources. Achieving this increase has been a long and arduous process.

The quadrupling of the IMF's resources has been carried out in two phases. The first was agreed at the G20 summits in London (April 2009) and Seoul (November 2010), where it was decided to increase the IMF's resources to around USD 1 trillion, by means of quotas and the New Arrangements to Borrow (NAB). The quotas paid by the member countries are the IMF's own resources, while the NAB are borrowed funds, albeit quasi-permanent ones, given the implicit commitment by lender countries to renew them automatically. The second phase was launched at the Los Cabos summit (June 2012), and has given the IMF additional temporary resources amounting to almost USD 500 billion. Table 1 shows the sequence of the steps taken to increase the IMF's resources.

At the London G20 summit, in April 2009, an increase in resources of USD 1.1 trillion was agreed for multilateral institutions, including USD 500 billion of contributions to the IMF (some SDR 325 billion) and an extraordinary allocation of SDRs, with a value of USD 250 billion, to increase international liquidity.<sup>5</sup> This decision tripled the resources that the IMF had had available for lending in 2007. Initially, the additional IMF resources were covered by bilateral contributions committed by 21 countries between 2009 and 2010. These contributions took the form of bilateral loans and note purchase agreements (NPAs), a new instrument created to satisfy the preference of the emerging economies, which enabled them to treat their contributions to the IMF as investments within their reserve management strategy.<sup>6</sup> Notable among the bilateral contributions are Japan's early contribution, made in February 2009, of USD 100 billion and those of the EU (USD 83 billion) and China (USD 50 billion).

After the London summit, the Executive Board of the IMF and the countries participating in the NAB entered into a complex technical and political debate over how to make these new resources permanent. This debate was also marked by the demand of the emerging economies (which had already dominated the 2008 quota reform) to obtain a redistribution of voting power and, therefore, of IMF quotas in their favour. Against this background, an agreement was reached in November 2009 to expand the NAB to SDR 370 billion (USD 530 billion), which multiplied its lending capacity almost tenfold;<sup>7</sup> and at the Seoul summit

3 The GRA finances the main IMF programmes. The IMF also manages the Poverty Reduction and Growth Trust (PRGT), earmarked for developing country programmes. The PRGT is financed by bilateral contributions from member countries and includes concessional elements in its loans.

4 Amounts in this article are expressed in SDRs, the IMF's unit of account, and are converted into US dollars (or some other currency) when the resources have been committed in other currencies. Table 1 shows the conversions.

5 SDRs had not been issued for almost 30 years. The first issue of SDRs was allocated in 1970-1972 (9.3 billion SDRs) and the second in 1979-1981 (12.1 billion SDRs). In 1997, the Fourth Amendment doubled the amount of SDRs (21.4 billion extra), although it was not approved by the US Congress until 2008; that same year an additional 167 billion SDRs (USD 250 billion) were approved [Moreno (2009)].

6 In July 2009, as an alternative to bilateral loans, the IMF approved an ad hoc framework for issuing notes to the official sector. The bilateral borrowing agreements have their precedent in the contributions of countries through development financing trust funds. Unlike trust funds, bilateral loans do not group resources into a single fund, remain bilateral and, instead of financing development, are linked to the IMF's conventional loans charged to the GRA.

7 The NAB was the option preferred by the G20, and especially by the United States, whose Congress approved a contribution of up to USD 100 billion to the IMF through the NAB.

## EVOLUTION OF THE IMF'S GENERAL RESOURCES ACCOUNT

TABLE 1

SDR millions

	2008		2009		2010		2011		2012		2013-2014	
	SDR	USD (b)	SDR	USD (b)								
<b>I Own funds</b>												
Quotas	217,373	334,754	217,373	334,754	217,432	334,845	237,356	365,528	238,116	366,699	476,232	733,397
<b>II Borrowed funds</b>												
First line of defence												
New Arrangements to Borrow (NAB)												
Original NAB	34,000	52,360	34,000	52,360	34,000	52,360						
Expanded NAB							363,247	559,400	369,997	569,795		
After rollback											182,371	280,851
Second line of defence												
Temporary bilateral loans and note purchase agreements (NPAs)												
First round			145,981	224,811	180,276	277,626						
Second round									186,932	287,875	299,351	461,000
<b>III Total resources</b>	<b>251,373</b>	<b>387,114</b>	<b>397,354</b>	<b>611,925</b>	<b>431,708</b>	<b>664,830</b>	<b>600,603</b>	<b>924,928</b>	<b>795,045</b>	<b>1,224,370</b>	<b>957,954</b>	<b>1,475,249</b>
Forward commitment capacity (FCC)	97,600	150,304	149,300	229,922	132,100	203,434	251,700	387,618	235,400	362,516	305,000 (a)	469,700 (a)
80% of second round of bilateral loans and NPAs											246,000	378,840
<b>TOTAL</b>											<b>551,000</b>	<b>848,540</b>

SOURCE: IRC-TF (2013).

a Data estimated taking into account the 2010 quota increase plus the NAB conversion, but not the second round of bilateral loans and NPAs.

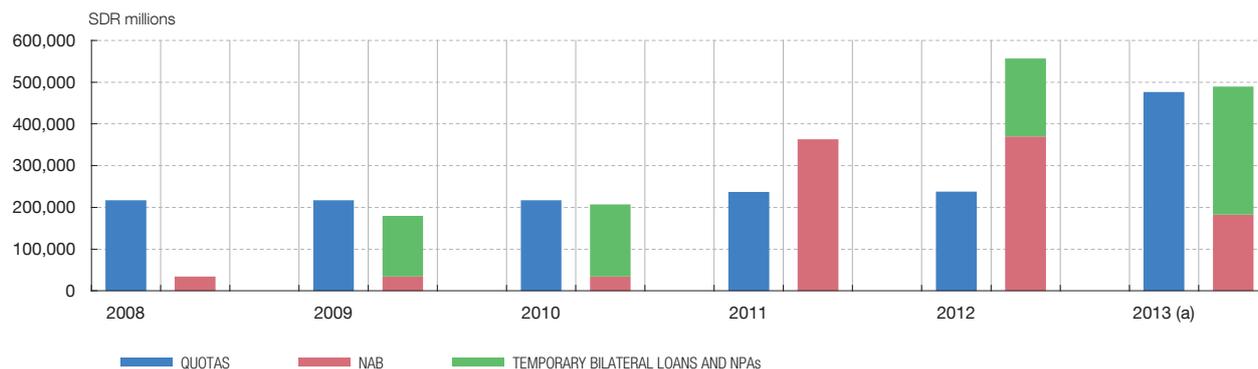
b Exchange rate of USD 1.54/SDR as at 30 December 2013.

(November 2010) it was established that part of this expansion would be covered by a shift of resources from bilateral loans and notes to the NAB, making the increase in the Fund's resources more durable (see Table 1). The expanded NAB was ratified in March 2011.

Further steps were taken in Seoul to finalise the increase in IMF resources, through the approval of a doubling of quotas and a change in their allocation in favour of the emerging economies.<sup>8</sup> It was decided to make a second shift of resources, this time from the NAB to quotas, to finance part of this increase. This shift is expected to take place in 2014, when the doubling of quotas agreed in 2010, still pending ratification by the US Congress, enters into force (the 14th review). After these changes, IMF resources will be allocated as follows: SDR 476 billion (USD 730 billion) in quotas and SDR 182 billion (USD 280 billion) in the NAB.

In addition, in June 2012, the G20 instigated a second round of increases in bilateral (and temporary) resources, which reached USD 461 billion (some SDR 300 billion), with commitments by 28 countries. This increase stemmed from the December 2011 EU Council initiative, which approved temporary contributions to the IMF of EUR 150 billion (SDR 127 billion), as a way of increasing the overall resources available for crisis management, against a background of a worsening in the euro area sovereign crisis. The

<sup>8</sup> For an analysis of the allocation of the increase in IMF quotas, see Moreno (2013), Chapter 4.



SOURCE: IRC-TF (2013).

a The quota increase and the second round voting on bilateral loans and NPAs are pending.

new round of contributions has also taken the form of bilateral loans and NPAs, and these form a second line of defence, after quotas and NAB resources. In general, they have a maximum drawdown period of four years (until 2017, in most cases), with the possibility of drawdowns after this period, in certain circumstances.

#### COMPOSITION OF RESOURCES: MORE BORROWED FUNDS AND MORE EMERGING ECONOMY RESOURCES

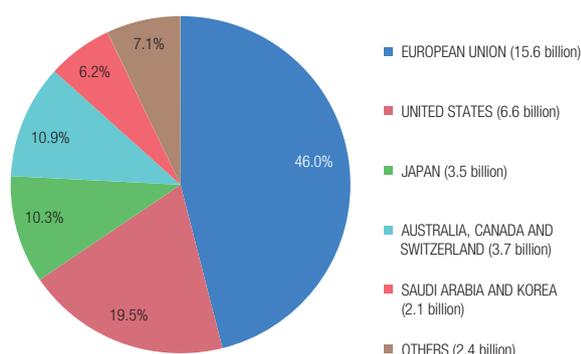
After the two phases of increasing IMF resources, there has been a very significant change not only in the volume of resources, but also in their composition (see Chart 1). In 2008, of the SDR 230 billion that the IMF had available, 87% were own resources (quotas), while the remaining 13% came from the NAB. In contrast, when the 2010 quota reform is finally ratified, resources will reach SDR 1 trillion, 49% of which will consist of quotas. Accordingly, the relative dependence on borrowed funds will have increased, with the NAB accounting for 19% of resources and bilateral loans/notes for 32%.

At the same time, there has also been a shift in the distribution by country, the relative weight of the emerging economies having increased. In the case of quotas, when the 2010 reform is ratified, the contribution of the emerging and developing economies will rise to 40.7% (from the current level of 37.5%). In the case of the NAB, the rise in the relative weight of the emerging economies is more evident. As seen in Chart 2, before its expansion the presence of emerging economies in the NAB was marginal, with Saudi Arabia making a notable contribution, in line with its significant presence in the IMF. Following the expansion of the NAB, the emerging economies (many of which are new participants) now contribute approximately one quarter of the resources.<sup>9</sup> The contribution of the four BRIC countries<sup>10</sup> is notable, giving them a joint veto over the main NAB decisions. The emerging economies are thus acquiring a new role as principal IMF creditors, in contrast to their traditional role as the main borrowers. The NAB proportions will remain the same following

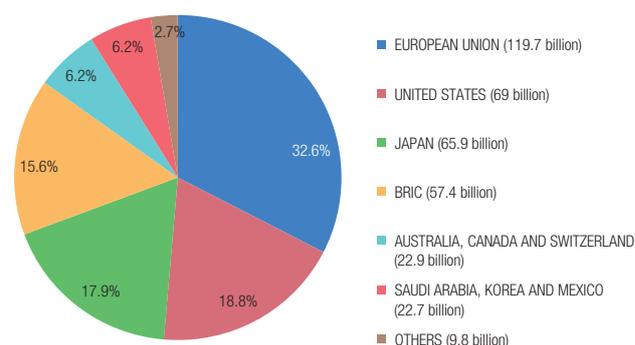
<sup>9</sup> The NAB has been expanded by raising the contributions of the existing 26 participant countries, and by obtaining contributions from 14 new participants. The existing NAB participants were: Australia, Austria, Belgium, Canada, Chile, Denmark, Finland, France, Germany, Hong Kong, Italy, Japan, South Korea, Kuwait, Luxembourg, Malaysia, Norway, Netherlands, United Kingdom, United States, Singapore, Spain, Sweden, Switzerland and Thailand. The new participants, as from 2011, are: Brazil, China, Cyprus, India, Israel, Mexico, New Zealand, Philippines, Poland, Portugal, Russia, and South Africa.

<sup>10</sup> China has contributed USD 50 billion and Brazil, India and Russia USD 14 billion each. The voting power of the four BRIC countries is 16%, which gives them the ability to veto decisions regarding the amount or admission of new participants (which require an 85% qualified majority).

NAB 1998-2010 (SDR 34 billion)



EXPANDED NAB FROM 2011 (SDR 367.4 billion)



SOURCE: Moreno (2013).

the shift of part of these funds to quotas, since the amount transferred will be in proportion to each member country's contribution.

### Sufficiency

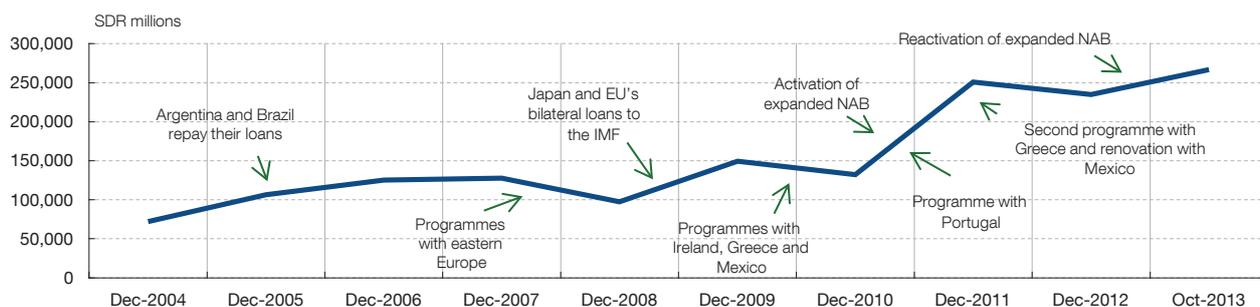
Not all IMF resources are available for lending. The “forward commitment capacity” (FCC) of the IMF<sup>11</sup>, a measure of its lending capacity, excludes resources already committed under outstanding loans and also certain precautionary balances. As seen in Chart 3, the FCC peaked in 2007, after Argentina and Brazil decided to repay their loans in 2005. However, by the end of 2008 the one-year FCC had fallen again as a result of the loans granted to eastern European countries in the autumn of that year, following the collapse of Lehman Brothers. Since then, the IMF has maintained its liquidity thanks, first, to bilateral loans, especially from Japan and from the EU in 2009 and 2010; and, since 2011, thanks to successive activations of the expanded NAB.<sup>12</sup>

In fact, the lending capacity of the IMF has increased considerably since 2009, even though this period has seen the highest growth in the volume of lending. The volume of outstanding lending rose from SDR 6 billion at the end of 2007 to SDR 85 billion in 2013, having peaked at SDR 90 billion in 2012. To this must be added the additional roughly SDR 77 billion in precautionary facilities.<sup>13</sup> This period has also seen the largest individual

11 The one-year forward commitment capacity of the IMF is determined by: i) the resources approved in the Financial Transactions Plan (FTP); ii) the resources available as a result of activation of the NAB and bilateral borrowing of the IMF, if activated; iii) the IMF's SDR holdings; less iv) resources committed under outstanding loans (whether or not disbursed and net of repayments expected within one year); and less v) a precautionary balance (20% of the quotas of the countries included in the FTP). The FTP is approved every three months and determines the quota resources the IMF can use to finance its lending. The quotas included are those of countries that, in the IMF's opinion, have a sufficiently strong external position. Most of these countries are advanced and emerging economies, but they also include developing economies. The quotas of countries not included in the FTP (e.g. countries with IMF programmes) are not considered lendable resources, as neither are the resources committed in the form of NAB by debtor countries.

12 The new NAB entered into force on 11 March 2011 and was first activated on 1 April 2011, with up to SDR 211 billion of available resources. Since then it has been activated, with similar amounts available, every six months. The activation procedure is an independent legal act of ratification approved by the participant countries for six-month periods if the IMF is judged to have an extraordinary need for resources.

13 To date, nine countries have signed precautionary arrangements. Three have signed an FCL: Poland (in 2009, for SDR 13.6 billion, with three renewals, the latest in 2013, for SDR 22 billion), Colombia (in 2009, for SDR 6.9 billion, renewed three times, the latest in 2013, for SDR 3.8 billion) and Mexico (in 2009, for SDR 31.5 billion, also renewed three times, the latest in 2012, for SDR 47 billion); two countries have signed a PCL/PLL: Macedonia (PLL in 2011, for SDR 410 million) and Morocco (PLL in 2012, for SDR 4.1 billion); in addition, the IMF has granted precautionary SBAs to Romania, El Salvador, Costa Rica and Guatemala. Five precautionary programmes are currently in force with Colombia, Mexico, Poland, Morocco and Romania.



SOURCE: IMF data [Moreno (2013)].

programmes in terms of volume of resources, notably the Flexible Credit Line for Mexico (currently SDR 47 billion) and successive rescue programmes for Greece (SDR 26.4 billion in 2010 and SDR 23.7 billion in 2012), Ireland (SDR 19.5 billion in 2010) and Portugal (SDR 23.7 in 2011).

However, although the IMF's lending capacity exceeded SDR 250 billion at the end of 2013, to which should be added SDR 300 billion of bilateral loans approved at Los Cabos, the debate regarding the sufficiency of IMF resources remains open. This debate hinges on two main lines of argument: the relative size of the IMF in relation to the global economy, and the risks to which the international monetary system and the member countries are subject, in an increasingly interconnected and more financially globalised environment, which the IMF must make secure.

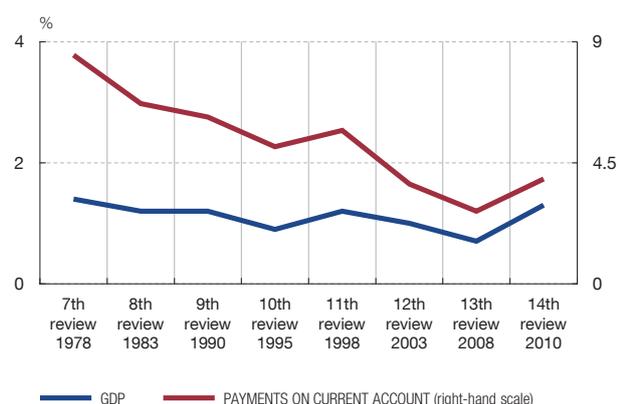
THE RELATIVE SIZE OF THE IMF HAS DECREASED, BUT OTHER GLOBAL FINANCIAL SAFETY NETS HAVE BEEN DEVELOPED

As Chart 4 shows, once the member countries have ratified the 14th review approved in 2010, IMF quotas will return to levels of around 1.3 % of world GDP, equal to those of 1998 or 1978 and in line with historical levels. The IMF's resources will, however, remain relatively low, again in historical terms, relative to other variables such as trade or capital flows (measured in the chart by payments on current account and by capital inflows and foreign liabilities), which will continue well below the levels of the early 1990s. Even adding to the quotas the resources received in the form of the NAB and bilateral loans in 2012, which doubled the IMF resources available, the levels relative to trade and capital flows are clearly below those reached in the 1990s.

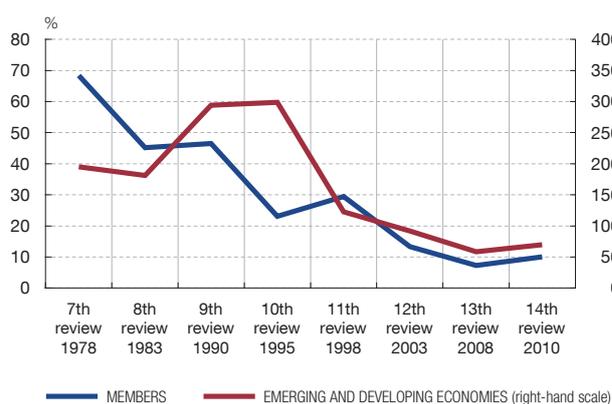
However, since 2009 a bigger role has been played by other global financial safety nets (GFSNs), which, apart from the IMF, include self-insurance through the accumulation of reserves, bilateral (swap) agreements between central banks or inter-country loans, regional financial agreements (RFAs)<sup>14</sup> and the involvement of the private sector. All these initiatives have been stepped up in recent years. Reserves increased by around 300% between 2000 and 2010, although they are heavily concentrated in Asian emerging economies. Currency swaps between central banks have become more frequent and are being applied in a more predictable framework. In addition, schemes to involve the private sector (such as the Vienna initiative) or debt restructuring processes have gathered pace. Finally, the development of RFAs has been particularly significant, as exemplified by the Chiang Mai Initiative Multilateralization (CMIM) in Asia, which has reached USD 240 billion (about SDR 156 billion), and the activation of

<sup>14</sup> For an analysis of GFSN and RFA, see Garrido, Moreno and Serra (2012).

QUOTA AS % OF GDP AND PAYMENTS ON CURRENT ACCOUNT



QUOTA AS % OF CAPITAL INFLOWS



QUOTA AS % OF RESERVES



QUOTA AS % OF EXTERNAL LIABILITIES



SOURCE: IRC-TF (2013).

successive mechanisms in Europe, which have finally given rise to the establishment of a permanent institution, the European Stability Mechanism (ESM), with a lending capacity of EUR 0.5 trillion (about SDR 440 billion).

There are thus safety nets other than the IMF which can act alternatively or supplementarily in the event of crisis. In fact RFAs usually envisage cooperation with the IMF. An example of working together can be found in Europe, where most of the adjustment programmes of euro area countries in difficulty (and, previously, of other EU Member States) have been based on cooperation between the IMF and the European financial mechanisms, a development which has also posed new challenges in coordination.

THE GREATER GLOBAL RISKS REQUIRE LARGER PROGRAMMES AND MORE AND BETTER PREVENTION

Globalisation and the growing economic and financial interconnectedness between countries have increased the risk of contagion and, therefore, of deeper and more costly crises. Historically, crises have manifested themselves mostly in problems in financing the current account balances of the countries affected. From the 1990s, however, in an increasingly interconnected global economy with growing international capital flows, crises have manifested themselves more through the financial account, requiring larger volumes of resources. Following this trend, the latest crisis broke out against a backdrop in which the financial market interlinkages and the size of the global financial system had expanded hugely and affected more highly developed countries, so that it posed even greater demands in terms of resources and of disbursements in the initial stages of the programmes.

In response to these changes, the IMF extensively reformed its lending policy, doubling the normal access limit on loans (to 600% of the quota), enhancing repayment schedule flexibility, re-assessing conditionality to make it more realistic and seeking programme ownership by authorities.<sup>15</sup> The new lending policy has led to substantial changes in the regular crisis-management programmes (stand-by arrangements), the ceilings on which have been raised to meet the needs of both emerging and advanced economies. The average size of the programmes has increased from 39% of the quota in 2007 to 886% in 2012, and from SDR 242 million in 2007 to SDR 12,831 million in 2012.

The new lending policy also includes a new insurance function based on two new instruments: the flexible credit line (FCL) and the precautionary and liquidity line (PLL). These facilities, which can be accessed by countries if they comply with ex ante access requirements, represent an about-face with respect to traditional programmes in that they are designed for countries which have solid fundamentals but which may be affected by external shocks, in an increasingly global economic and financial environment with greater external vulnerabilities.<sup>16</sup>

The impact of the new precautionary lines on the sufficiency of IMF resources is twofold. First, they use a large amount of funds, particularly the FCL. Second, they are designed to reduce contagion risk and hence recourse to the IMF in the event of crisis. The design of these facilities, which will be reviewed in 2014, is the subject of a debate between two opposing stances: that their use should be confined to special situations and therefore an exit strategy must eventually be available; and that their use should be continuous because they contribute to market stability and are superior to other alternatives such as (excessive) reserve accumulation (which is inefficient from a global standpoint) or swaps between central banks (subject to uncertainty in their activation).

The international community has also learnt lessons from the crisis and is developing a more robust regulatory and oversight framework aimed at ensuring that crises like the latest one are not repeated in the future. There have been numerous initiatives on a national, regional and international scale. The most significant international ones have been channelled through the Financial Stability Board (FSB), an institution created by the G20 following the 2008 crisis to coordinate the financial regulation and supervision reform. Notable among the decisions taken are the setting of higher capital requirements for banks and insurers (Basel III and Solvency II), including specific treatments for global systemically important banks (G-SIB), the development of new macroprudential rules, the establishment of monitoring and control strategies for international capital movements, and the implementation within the G20 of a framework for surveillance of imbalances, which puts special emphasis on the global and national effects of the domestic macroeconomic policies of IMF member countries.<sup>17</sup>

The IMF has updated its arsenal of surveillance tools in two ways: greater emphasis on analysing interlinkages and spillovers, and enhancement of the financial system surveillance network. More and better surveillance should reduce the outbreak of new crises or at least reduce their impact and make for rapid crisis management, thus lowering crisis adjustment costs.

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<sup>15</sup> Crisis resolution loans made out of the GRA are simplified by reducing them to two financing facilities: Stand-By Arrangements (SBAs) and IMF Extended Fund Facilities (EFFs).

<sup>16</sup> These facilities have access limits of up to 1,000% of the quota, with no express ceiling in the case of the FCL.

<sup>17</sup> For a detailed analysis of this framework, see Estrada (2012).

In short, the debate on the sufficiency of IMF resources is conditioned by expectations as to the type and size of future crises and by the confidence in the prevention instruments developed in recent years. However, although supervision and regulation mechanisms are now more sophisticated, the medium-term time horizon continues to be characterised by high uncertainty as to how the recovery phase will unfold and as to how the exit from the recently applied expansionary fiscal and monetary policies will be effected, all of which advises caution.

#### Neutrality and flexibility

Two other key factors when it comes to assessing the size of the IMF are the neutrality with regard to incentives (or moral hazard) which an overly large IMF may generate, and flexibility in the availability of those resources.

#### NEUTRALITY AND MORAL HAZARD

An important consideration for assessing the volume of the IMF's resources is the moral hazard which may derive from an institution which is too large and has an overly generous lending policy towards borrower countries or their creditors.

The new (less stringent) framework of the crisis resolution programmes and the absence of ex post conditionality in underwriting facilities may increase the risk of unsustainable or imprudent conduct by both countries potentially benefitting from programmes and by international investors because of the expectation that, in the event of crisis, the IMF will rescue the country. That said, as Dreher (2004) points out, the literature on the moral hazard of crisis resolution programmes is not conclusive in this respect.<sup>18</sup> As regards the absence of ex post conditionality of the new precautionary facilities, there is a general trend at the IMF to give greater weight to a firm commitment by the authorities of borrower countries (ownership) to the objectives and policies included in the programmes, and to monitor programmes more on the basis of their overall effectiveness than on the proliferation of pre-set conditions as occurred previously, such conditions often failing to be fulfilled.

Also, a large IMF may in itself constitute a source of confidence for the financial markets, since it sends the message that sufficient support is available if needed and thus reduces the uncertainty channel of contagion.

In any event, besides the volume of resources, there are other factors which may lessen moral hazard. Insofar as the borrower is concerned, the requirements for accessing precautionary programmes must not be relaxed and regular checks made that they are met. It is also important to pursue a more effective surveillance policy allowing the risk of crisis and unsustainable conduct and policies to be detected in time, as a necessary precondition of the lending policy. Regarding creditor moral hazard, consideration should be given to increasing private-sector involvement in crisis resolution, including the strengthening of actions of the Vienna Initiative type.

#### FLEXIBILITY IN THE DRAWDOWN OF RESOURCES

As regards flexibility, it is important that IMF resources can be marshalled and used rapidly whenever needed. In this respect, some formulas used since 2008, such as the rollover of bilateral loans, the NAB and quotas, show a considerable initial response capacity, which was subsequently transformed into a permanent increase in resources. However, that higher flexibility is linked for the time being to the receipt of loaned funds and depends on

<sup>18</sup> Dreher (2004) reviews the literature on moral hazard in crisis resolution programmes and reports that it is not conclusive as to the importance of moral hazard. Jeanne and Zettelmeyer (2004) reject the existence of moral hazard in IMF programmes in that they question the methods of the traditional literature, which asserts that moral hazard exists because of improved financial conditions or capital flows to countries receiving programmes, given that the purpose of the programme is precisely to improve them. What is important is that the programmes reflect normal market conditions and the costs borne by the IMF.

Own funds/Liquidity creation	
Quotas	Quotas are the primary and permanent source of the IMF's financial resources and reflect its nature as a cooperative monetary institution. The quotas of member countries are assigned using a formula based on each country's relative position in the world economy. Any changes to quotas have to be approved by an 85% majority of total votes and require parliamentary approval of the member country. General quota reviews are conducted at least every five years.
SDRs	The IMF can opt to create liquidity through the issuance of special drawing rights (SDRs), which are a potential "asset" vis-à-vis the freely usable currencies of IMF member countries. They were originally created in 1969 to support the fixed parity system of Bretton Woods. However, SDR issues have been limited and require an 85% majority of votes.
Leverage	Leverage can also serve as a source of liquidity. However, in practice the IMF does not engage in leverage, since it only commits the funds it receives from member countries through the various instruments available (quotas, GAB, NAB, bilateral loans, NPAs). A consequence of this is that in calculating the IMF's liquidity, all committed funds are deducted regardless of whether or not they have been drawn down by the country under its loan programmes, including precautionary facilities (FCL and PLL), despite the fact that they have been conceived and designed not to be used.
Borrowed funds	
NAB/GAB	NAB are the IMF's main backstop, supplementing the funds received from quotas. They encompass a number of multilateral credit arrangements between the IMF and 40 member countries under which the latter undertake to provide additional resources to the IMF if the quotas are considered insufficient. Although NAB are usually rolled over for regular five-year periods (85% majorities), they are a de facto mechanism of quasi-permanent financing because rollover has been automatic and continual since they were implemented in 1998. NAB are activated (for use) for maximum periods of six months. Along with NAB, GAB (general arrangements to borrow) are used by eleven countries willing to lend to the IMF certain amounts of their national currencies and are activated subsidiarily to NAB.
Bilateral loans/NPAs	Bilateral loans and NPAs are financing facilities which supplement quotas and NAB. Currently these mechanisms are considered as a temporary instrument of an exceptional nature, i.e. a "second line of defence" designed to mitigate the effects of the global financial crisis, which can only be used once NAB are activated and the FCC falls below SDR 100 billion. They are highly flexible financing instruments because, once they have been approved by the IMF Executive Board, they only require an agreement with the creditor country in question.
Private sector	The IMF's Articles of Agreement empower it to raise funds on the international markets by issuing bonds under two conditions: a) it cannot obtain them from its member countries by other means and b) the need for financing relates to the IMF's transactions. The resolution to issue bonds requires a simple majority of votes. So far this mechanism has never been used owing to concerns that the IMF may become dependent on the private sector.

SOURCE: IMF information.

the will of the lender countries: in 2009 the IMF only preserved its liquidity thanks to early support from Japan and the EU. There is thus scope to seek mechanisms allowing the IMF greater flexibility in raising funds, without need to depend on third parties.

Table 2 lists the characteristics of the various sources of funds. Quotas allow more discretionality to the IMF as regards their use, since they are own funds, but there are greater restrictions when it comes to increasing them. Increasing quotas requires a majority of 85% and passage through parliament in most countries. Ideally, quotas should be adjusted over time to keep them stable relative to the main variables of the global economy (GDP, trade or capital flows). However, although the quotas are reviewed every five years, there is a reluctance to raise them because countries' voting powers may be affected. Significant increases take place slowly and are usually in response to situations of clear need for resources, as in 1998 (Asian crisis) or in 2008-2010 (global financial crisis). Once the threshold of USD 1 trillion in the total of quotas plus the NAB has been reached, it is difficult to envisage further rises in quotas beyond those necessary to redress

distortions in voting power. Nor does the issuance of SDRs to create unlimited liquidity seem viable in view of the lack of political support for an IMF acting as a central bank.<sup>19</sup>

Two highly flexible financing alternatives are the recourse to indebtedness to the private sector (permitted in the Articles of Agreement of the IMF) and the leverage of loans. This second alternative would be particularly justifiable in the case of the FCL, the weight of which in the calculation of IMF liquidity represents a heavy burden (100%) despite the expectation that the line will not be used. These options enjoy greater political support than SDR issuance, but continue to meet considerable resistance in the Executive Board, basically motivated by a desire to avoid depending on market credit.

In short, the most rapid alternative if additional funds are needed is probably to turn to bilateral loans or to place notes with official creditors.

## Conclusions

Since 2009 the IMF has significantly increased its resources, reaching the barrier of USD 1 trillion in quasi-permanent resources. It also has an additional temporary cushion of another USD 0.5 trillion in temporary funds until at least 2017.

This structure has allowed the lending policy to be expanded, but in the medium term there are questions as to its sufficiency, against a background characterised by recovery of the advanced economies and deceleration of the emerging economies. A central element will be the use made of the precautionary facilities in the coming years, since these account for a large volume of funds. Important in this respect is the review under way of these facilities to minimise the problems of moral hazard which may be posed.

Ideally, quotas should be adjusted automatically over time to reflect the relative weight of countries and the potential need for resources (e.g. keeping resources within a certain range relative to the main indicators of the global economy). That said, taking into account historical experience and the difficulties of governance associated with quota increases (a majority of 85% is required), automatic or significant increases are unlikely, although there may be small increases intended more to rebalance voting power than to ensure the sufficiency of resources.

In these circumstances, it will be important for the IMF to have the flexibility to allow it to increase its resources rapidly if necessary. Recent experience has already established a precedent in the form of bilateral loans and the NAB, which will probably be used again in the future. Nevertheless, these instruments depend on member countries' willingness to contribute. Other similarly flexible alternatives which would allow the IMF more autonomy are indebtedness to the private sector (permitted in the Articles of Agreement of the IMF) and the leverage of loans, particularly in the case of precautionary facilities, which however are not expected to be used. These options face considerable resistance from the Executive Board insofar as they entail a dependence on market credit. Even so, it may be worth exploring their development as a backstop.

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<sup>19</sup> The metaphor used by Boughton to describe the take-off of the SDR is "the flight of the dodo", an extinct flightless bird symbolising something obsolete or out of place [Boughton (2011)].

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