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IN-DEPTH ANALYSIS

A European Monetary Fund?

External author: **Charles Wyplosz**
The Graduate Institute, Geneva

Provided at the request of the
Economic and Monetary Affairs Committee

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the Eurogroup
in the Economic and Monetary Affairs Committee

Abstract

The creation of a European Monetary Fund seems a natural next step to improve upon the European Stability Mechanism. This paper argues that such a step is neither necessary nor desirable, for many reasons. First, the European Stability Mechanism is a fundamental contradiction with the no-bailout rule, which is arguably the most crucial instrument to foster fiscal discipline in the Eurozone. Second, any insurance mechanism creates moral hazard. A European Monetary Fund would be deeply immersed in conflicts of interest among its members. Third, it would have to fit in alongside the Commission and the Eurosystem, already in charge of monitoring the Eurozone countries, preventing crises, lending in last resort and developing debt-restructuring principles. Fourth, it would need a highly competent staff to deal with crises but idle in quiet times. Fifth, its governance should guarantee fast action when needed, with proper accountability and undue politicisation. These are serious hurdles and the IMF can perform the task.

This paper was requested by the European Parliament's Economic and Monetary Affairs Committee.

AUTHOR

Charles Wyplosz, The Graduate Institute, Geneva

RESPONSIBLE ADMINISTRATOR

Alice Zoppè
Economic Governance Support Unit
Directorate for Economic and Scientific Policies
Directorate-General for the Internal Policies of the Union
European Parliament
B-1047 Brussels

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ABOUT THE EDITOR

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E-mail: egov@ep.europa.eu

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LIST OF ABBREVIATIONS

AMF	Asian Monetary Fund
CAC	Collective action clause
DSA	Debt Sustainability Analyses
ELA	Emergency Liquidity Assistance
ECB	European Central Bank
EFSF	European Financial Stability Fund
EMF	European Monetary Fund
ESM	European Stability Mechanism
Eurosystem	ECB and National Central Banks of the euro area
FCL	Flexible Credit Line
IEO	Internal Evaluation Office
IMF	International Monetary Fund
MoU	Memorandum of Understanding
OMT	Outright Monetary Transaction
TFEU	Treaty on the Functioning of the European Union

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EXECUTIVE SUMMARY

During the Eurozone crisis, the initial reluctance to involve the IMF has led member countries to progressively develop their own lending capacities, starting with bilateral loans, then creating the temporary multilateral European Financial Stability Fund to finally establishing the European Stability Mechanism. Would it not be natural to complete this evolution and go all the way and create a European Monetary Fund?

The idea of establishing regional monetary funds is not new but none has been adopted so far. In addition to possible resistance by the IMF and many of its shareholders, a European Monetary Fund would face a number of daunting challenges.

The first and more difficult one concerns the treatment of moral hazard, that is the risk of doing more harm than good by providing incentives to governments to borrow excessively, or to allow excessive private borrowing, in the anticipation that they will be bailed out. Another source of moral hazard concerns public and private lenders that grant excessive loans in the anticipation that the international lender will bail them out. The international lenders may also succumb to excessive lending if they expect that private lenders and taxpayers will pay for losses if and when they arise.

The moral hazard issue is inescapable and its treatment is fraught with major difficulties. The IMF has grappled with this issue for seven decades now and it will continue its search for decades to come. In many respects, this challenge is steeper at the regional level among closely-knit countries. Conflicts of interest loom large, and conflicts can be highly damaging to the bigger picture of economic and financial integration.

The main treatment of moral hazard is the imposition of conditions that a borrowing country must commit to. Because the first reason why a country requires help is that it has pursued unsustainable macroeconomic policies, the conditions aim at modifying these policies. However, it is often the case that these policies were mistaken responses to structural flaws. This is why lending programmes may include structural conditions. While macroeconomic conditions amount to some loss of sovereignty, the loss is deeper and more politically difficult in the case of structural conditions, because they permanently redistribute income and wealth. Finding the right mix and number of conditions is a complex undertaking, fraught with economic and political difficulties.

Yet another moral hazard issue concerns the treatment of external and public debts inherited from the past. Reducing old debts is obviously an encouragement to build new debts. On the other hand, old debts may represent a near-impossible hurdle. Very unfortunately, there is no way to determine when a debt is excessive. The current methodology, known as debt sustainability analysis, is both highly imprecise and open to all sorts of prejudices and conflicts of interest. The IMF has been vacillating on its approach to the issue. A regional fund is bound to find the challenge even more forbidding, because the conflict of interests are bound to be more intense, given the maze of financial linkages among countries and financial institutions.

Beyond the moral hazard question, the creation of a European Monetary Fund is bound to raise difficult questions regarding the Eurozone institutions. At present, the European Commission is in charge of crisis prevention, through its surveillance mechanism, and now of crisis management. Would these two functions be transferred to the European Monetary Fund? If so, what would be its governance structure? The current lending arrangement is far from ideal. Lending decisions are formally taken by the Council of Ministers, in fact the Eurogroup, in agreement with the Eurosystem. The European Stability Mechanism is in charge of raising resources and making them available to crisis countries. Its own governance guarantees that Council's decisions will be followed through. This process is not just cumbersome, it also injects a heavy dose of politicisation into highly complex technical considerations. Should the Mechanism be transformed into a Fund, a different arrangement

would have to be designed. It should combine technical expertise and accountability, not just to member governments but also to taxpayers.

Another thorny issue concerns the relationship between the European Monetary Fund and the Eurosystem. The experience so far is that the main decisions have been taken by the Troika, which brings together the European Commission, the IMF and the ECB. By now it is widely agreed that this is not a desirable arrangement and one reason is the presence of the ECB. As the central bank of the country receiving assistance, the ECB faces a conflict of interest. It is duty bound to support all member countries, which makes it difficult to impose conditions. In addition, according to the treaties, the ECB is prohibited from issuing recommendations to member governments. A proper arrangement with the ECB is required.

The ultimate goal of a European Monetary Fund should be to avoid debt crises, which requires achieving fiscal policy discipline in each and every member state as well as to prevent financial stress that may lead governments to borrow heavily. The current arrangement, built on the Stability and Growth Pact, has repeatedly failed. As a result, it has been reformed several times, but it remains doubtful whether the pact will be more effective in the future. Fiscal discipline will be at the heart of the Fund's prevention function, if it is given this function. What would be its role and how would it coordinate with the European Commission, formally in charge of implementing the pact? Digging deeper, the Maastricht Treaty established a no-bailout clause as the lynchpin for establishing fiscal discipline, but this clause has been implicitly dismissed during the Eurozone crisis. The very existence of a European Monetary Fund, an institution designed to bail countries out, would be last nail in the coffin of the no-bailout clause.

In the end, given these difficult challenges, the question remains of whether we need a European Monetary Fund when we have an International Monetary Fund. One reason to do so is that the IMF's resources are insufficient to deal with a major crisis that affects developed countries that are deeply integrated financially, especially if the crisis is contagious. When the situation arises, the usual practice is for the IMF to design and implement country programmes, and to collect funds from friendly – typically neighbouring – countries.

1. INTRODUCTION

This paper was requested by the European Parliament under the supervision of its Economic Governance Support Unit.

The Maastricht Treaty did not envision any mechanism of the kind now embedded in the expression European Monetary Fund (EMF). Quite to the contrary, it explicitly forbade any form of assistance to a member country facing financing needs, even acute ones. Yet, when the Eurozone debt crisis gathered momentum in early 2010, Gros and Mayer (2010) argued in favor of a European Monetary Fund. They noted that the risk of systemic financial turmoil implied that the no-bailout clause could only be relative, not absolute, and they invoked the Treaty's solidarity principle to provide legal backing. Eventually, the Eurozone member countries created first the European Financial Stability Fund (EFSF) and next the European Stability Mechanism (ESM). The question is whether the rocket now needs a third stage.

This question raises a number of issues. The first one is that we already have an *International Monetary Fund*. Why, then, is a *European* one needed? Two answers have been provided. The first one is technical: the IMF does not have the financial resources needed to deal with emergency needs of advanced countries. The second is political, best encapsulated by the ECB's initial fierce opposition to any IMF involvement in Eurozone affairs.¹

The second important issue concerns the moral hazard of lending and its containment. The ESM lends within the framework of a Memorandum of Understanding (MoU), which involves strict conditions and their surveillance. This is a practice borrowed from the IMF, which would be retained in any EMF. However, the design and surveillance of conditions very much depend on the decision process. The current process in the Eurozone is cumbersome as it involves the European Commission, the Eurogroup and the Council. In some countries, lending to other countries must be approved by the national parliament. One reason to establish a EMF is to streamline this process, following best practice, which currently is IMF practice. IMF lending and the associated conditions are prepared by the staff, with internal supervision by several departments, before they are presented to the Executive Board, with extensive justification. This leads to in-depth debates and it leaves a trail of how the decision was reached. This trail is available for possible *ex post* evaluation by the Independent Evaluation Office (IEO) and, sometimes, by an internal evaluation by the staff, which is made public.

The third issue concerns the European Central Bank (ECB). The experience so far is that the main decisions have been taken by the Troika, which brings together the European Commission, the IMF and the ECB.² By now it is widely agreed that this is was not a desirable arrangement (IEO, 2016; Blustein, 2016; Weder di Mauro and Zettelmeyer, 2017). One reason is the presence of the ECB. Although each Eurozone country has its own central bank, national central banks are not autonomous since all key decisions are made by the Eurosystem. In turn, the ECB acts on behalf of the Eurosystem. *De facto*, therefore, the ECB acts as the central bank of all member countries. Its presence in the Troika leads to a conflict of interest. It is duty bound to support all member countries while the Troika imposes conditions. In addition, according to the treaties, the ECB is prohibited from issuing recommendations to member governments. Should it be created, the EMF would have to work out a proper arrangement with the ECB.

Fourth, the ultimate goal of the EMF must be spelled out unambiguously. When the first rescue of Greece was decided, it was justified as follows:

¹ Its President, Jean-Claude Trichet said: "If the IMF or some other body exercises the responsibility in lieu of the Eurogroup or instead of governments, it is evidently very, very bad", Reuters, 25 March 2010, <http://www.reuters.com/article/france-trichet-idUSLDE62O2C420100325>.

² With the third Greek programme in 2015, the Troika was replaced by "the Institutions", which now include the ESM with an uncertain participation of the IMF.

“In the wake of the crisis in Greece, the situation in financial markets is fragile and there was a risk of contagion which we needed to address. We have therefore taken the final steps of the support package for Greece, the establishment of a European stabilisation mechanism and a strong commitment to accelerated fiscal consolidation, where warranted.” (Economic and Financial Council, [Council Conclusions](#), Brussels 9-10 May 2010). Thus the rescue’s objectives were to calm financial markets down, to prevent contagion and to speed up fiscal consolidation. Conspicuously missing is improving the situation of the Greek population “in the wake of the crisis”. In contrast, the IMF’s mission is described as follows:

“A core responsibility of the IMF is to provide loans to member countries experiencing actual or potential balance of payments problems. This financial assistance helps countries in their efforts to rebuild their international reserves, stabilize their currencies, continue paying for imports, and restore conditions for strong economic growth, while undertaking policies to correct underlying problems.” (<http://www.imf.org/en/About/Factsheets/IMF-Lending>).

Fifth, the original proposal for an EMF by Gros and Mayer (2010) was focused on dealing with the public debts that were the direct cause of the crisis:

“In the recent financial crisis, policy has been geared solely towards preventing failure of large institutions. In the future, however, the key policy aim must be to restore market discipline by making failure possible. For the Eurozone this means that the system should be made robust enough to minimise the disruption caused by the failure of one of its member states.”

(Gros and Mayer, 2010).

They anticipated what has become, and remains, a key disagreement between the IMF and the other Troika members, with wide-ranging implications. The point is that orderly debt restructuring cannot be divorced from international lending in emergency. Unsurprisingly, it is also central in the proposal for an EMF by Weder di Mauro and Zettelmeyer (2017). In fact, its importance has been officially recognized in the treaty that gave birth to the EMS. The treaty requires that all future borrowing by Eurozone member states include a collective action clause (CAC) designed to facilitate debt restructuring.

Finally, the ultimate goal should be to avoid debt crises, which requires achieving fiscal policy discipline in each and every member state. The importance of fiscal discipline was clearly recognized by the Maastricht Treaty. It was recalled from the start of the crisis, as evidenced in the Council quotation above, and it led to amendments to the Stability and Growth Pact. Yet, the pact is deeply flawed and remains highly unlikely to deliver lasting fiscal discipline in each and every country (Wyplosz, 2016). What would be its role in the EMF and how would it coordinate with the European Commission, formally in charge of implementing the pact?

The idea of setting up an EMF has been revived recently, when the Managing Director of the EMS argued that it should be an ESM+, an institution with a broader mandate and a slimmed down decision process (Regling, 2017).

This note examines what such a transformation would entail. The suggestion that regional monetary funds could be set up alongside the IMF is not new. Previous debates are recalled in the next section, which also examines some specificities of the Eurozone. Section 3 takes a step back, as it presents what are the functions of an international lender. It points out how deeply challenging the task is. Section 4 applies this analysis to the case of a European Monetary Fund. It examines both the operational and institutional aspects of such an undertaking. All along, the reference is the International Monetary Fund, against which the merits of a European Fund must be assessed. The last section concludes.

2. HISTORY OF A CONTROVERSY

2.1 The East Asian crisis

In September 1997, in the early phase of the South-East Asian crisis, the Japanese government proposed to create an Asian Monetary Fund (AMF). After considerable hesitation, the Thai government had applied to the IMF. The conditions imposed by the IMF were widely seen in Asia as excessively stringent – especially regarding fiscal austerity – and were soon relaxed somewhat. The amounts that the IMF could provide under its own rules were too small for the task. The support package totalled \$17.2 billion, with contributions of \$4 billion by the IMF, \$4 billion by Japan, and smaller amounts by Asian countries, the World Bank and the Asian Development Bank. Importantly, the US did not contribute. In spite of its minority contribution, the IMF was in charge of designing and monitoring the program, including authorizing disbursements. The AMF proposal was motivated by this perceived imbalance, but not only. Katada (2001) mentions the risk of contagion, the need to protect Japanese investments in the region and the desire by some countries interested in providing financial support, such as Australia, to move from politically difficult case-by-case funding to a more structured framework.

Paramount in these efforts was the regional desire to escape the Washington Consensus, the then-dominating view that national economic institutions should follow the principles of trade opening, market-friendly reforms, fiscal discipline and a monetary policy aiming solely at price stability, including exchange rate flexibility. The IMF and Western governments interpreted the criticism of the Washington Consensus as a call for less disciplined policies. As a result, the AMF was perceived as a way of offering easier conditions to crisis countries. This led to the rejection of the AMF on the ground that it would undermine the IMF and create a dangerous moral hazard by encouraging policies that eventually lead to a crisis that are then financed far too leniently. China too was opposed to the AMF but for political reasons: it saw the AMF as an effort by Japan to assert its influence in the region, which was indeed another motivation. Faced by such opposition, Japan shelved its proposal, but pursued a less ambitious strategy, which eventually led in 2000 to the Chiang Mai Initiative, a series of bilateral swaps among central banks of the ASEAN + 3 countries. Over time, the Chiang Mai Initiative has been further developed to include a permanent office. Yet, the initiative is careful enough to place the IMF at the centre of its assistance: in order to benefit from the swaps, a country must first agree to an IMF program, which provides the first line of defence.

Many aspects of this failed attempt at establishing a regional monetary fund are relevant to the debate about an EMF.

- First, several of the same motivations were invoked when the Greek rescue was put in place: fear of contagion, desire to protect foreign investments – especially foreign bank loans to the Greek government – and a political desire to dispense with direct involvement by the IMF in regional affairs.
- Second, the resources of the IMF are quite limited, so that a large rescue package must involve contributions by other countries. Usually in previous cases (e.g. Mexico in 1995, South East Asia in 1997-8) the countries most willing to contribute are those that have the stronger economic ties with the crisis country. The “law of trade gravity” implies that countries from the same region are the most likely contributors.³
- Third, moral hazard is always a major issue. The Troika (during the Eurozone crisis) has been more demanding than the IMF alone (in other crises) in setting conditions, in delaying debt restructuring and in tightening the approval process. In so doing, the Troika has shifted the balance between borrower and lender moral hazard from the former to the latter, an issue explained and examined in Section 4.3.1.

³ Trade gravity is probably one reason why regional development banks have developed alongside the World Bank.

- Fourth, politicisation is always a concern. A recurrent criticism of the IMF is that it is a political institution. This is unavoidable. However, once a programme is completed, the IMF ‘disappears’ from the country, usually leaving a trail of inconsequential resentment. Regional funds remain part of the regional landscape and resentment stands to pollute relationships between closely-knit states.

2.2 The Eurozone crisis

The management of the Eurozone crisis has evolved over time, in response to unexpected and unwelcome events rather than along a well thought-through strategy. The first rescue of Greece in May 2010 was explicitly described as a unique and exceptional response to a unique and exceptional event. The programme conditions were coordinated by teams from the European Commission and the IMF. Financial support came in the form of bilateral loans from Eurozone governments. Soon thereafter, the European Financial Stability Fund (EFSF) was created in the form of a private status special purpose vehicle. As the crisis spread from Greece to Ireland, Portugal, Spain and Cyprus, the arrangement became increasingly permanent. Eventually, a treaty set the ESM up as an international organization that took over from the EFSF.

An important aspect is that a condition for ESM to lend is that it be accompanied by an IMF loan. “whenever appropriate and possible” (EMS treaty, art. 13-1(b)). The loan conditions should normally, therefore, be coordinated between the European Commission and the IMF and approved by the ECB, thus creating the Troika. From the start, tensions have characterized the relationship between the three institutions, especially between the Fund and the Commission (IEO, 2016; IMF 2017). These tensions have grown over time. The latest ESM loan to Greece, decided in 2015, was not accompanied by an IMF loan. Officially, the IMF will join later on but, in practice, the Troika is not operational any more, and is now replaced by “the Institutions”.

The disagreements have concerned various aspects. The most important one has been the question of the initial restructuring of the Greek debt.⁴ The ECB and the Commission strongly opposed any discussion of debt restructuring, while the IMF reluctantly went along, which forced it to change its exceptional access lending procedure designed to allow for loans far in excess of the agreed ceiling. Indeed, the IMF is not allowed to make such a loan unless its staff certifies that the debt is sustainable, in the sense that there is a high probability of being fully honored. As the IMF staff could not provide such an assessment, a new clause was subreptically added, waiving the debt sustainability condition in presence of a serious risk of systemic contagion. This systemic exemption clause has since been revoked and replaced in 2016 by a clause that allows exceptional lending, even if debt sustainability cannot be ascertained, when there exist other sources of financing, including “intended debt restructuring”, so that the Fund’s loan is safeguarded.

The 2010 adoption of the systemic exemption clause created considerable turmoil within the IMF. It was an unmistakable indication that the Fund felt it necessary to go along a programme that: 1) it did not control; 2) it deemed risky for both Greece and its own resources. The new clause is also significant because 1) it is an explicit acknowledgement that the previous one was mistaken, and 2) it officialises the co-management of programmes by “other sources”, thus opening the door to regional funds.

When the Asian Monetary Fund project was put forward in 1997, it was promptly dismissed by the IMF and its main shareholders, especially the US and the European countries, while the European intervention during the Eurozone crisis was fully supported by the Fund and its main shareholders. Several explanations have been put forward. The first one is that a monetary union is a *very different*

⁴ By 2012, this position had become untenable and it was decided to deeply restructure the privately held part of the debt, a process labelled Private Sector Involvement. The need for an Official Sector Involvement is now an actively debated issue, strongly supported by the IMF and recognized by the EU as a possibility “for later”.

animal. The common currency indicates a profound pre-existing degree of regional cooperation, sealed by extensive institutional and legal arrangements. This includes the existence of a common central bank, whose responsibilities already expand to all member countries. The second explanation is more political and has been a source of frictions within the IMF, including its Executive Board. Critics have asserted that the EU exerts power that exceeds its actual importance and that the US sided with the Europeans because it feared for its own financial institutions and the badly shaken world financial system in the wake of the Global Financial Crisis. A third explanation is that the European project was essentially pragmatic and less ambitious than the full-fledged AMF. The move to a true EMF could reactivate some of the fears generated by the Asian project.

2.3 The Eurozone oddity

The IMF has been designed to provide countries with the foreign currencies that it needs when its central bank runs out reserves and when borrowing from the private sector has become impossible. The ESM, instead, provides euros to a Eurozone government that runs a fiscal deficit – including debt service – and has lost market access. The ECB can also provide euros to solvent financial institutions when they too are unable to borrow from other financial institutions. This Emergency Liquidity Assistance (ELA) is conducted by the local national central bank, which takes the corresponding risk, but must be authorized by the ECB.

This may seem odd, but it is not. Much as a central bank cannot create foreign currency that its government or financial institutions need, in the Eurozone national central banks cannot create euros on their own, as they need prior authorization by the ECB. In that sense, the euro is a *foreign currency* for the Eurozone member countries. As a consequence, a Eurozone country may run out of euros, pretty much as any country that is not the US may run out of dollars. When it happens, a Eurozone country may go either to the IMF or to other countries that will lend euros. In that case, the IMF will draw on its own reserves and the other countries will borrow on the financial markets the euros that they need. The ECB can create euros to conduct ELA operations, but it is forbidden by the treaties to lend directly to member governments. Yet, nothing prevents the ECB to buy government debt on open, secondary financial markets, which is a well-known way to circumvent the direct lending prohibition. In the event, the ECB has done it repeatedly through its Long-Term Refinancing Operations (LTRO) and its Securities Market Programme (SMP), although it has always been careful to justify these actions as measures to correct malfunctioning financial markets. The ECB's Outright Market Transactions (OMT) programme was a commitment to buy public debts to contain large spreads affecting the crisis countries.

As noted by de Grauwe (2012), this specific feature of the Eurozone is a major source of fragility. Imagine that the US federal government would lose access to financial markets. No one seriously doubts that the Federal Reserve would immediately step in and buy any amount of US bills and bonds – the US government always borrows in US dollars – that it would deem necessary to reassure the markets. Knowing this, the financial markets are most unlikely to ever close the door to the US federal government. In contrast, each Eurozone member government operates under the threat that it may lose market access. Eurozone countries may seem to be in the same situation as individual US states or municipalities, since the Federal Reserve is forbidden not just to lend to these public entities, but also to buy, or even deal with their debt instruments. This is not quite accurate, though. The ECB is allowed to buy and deal with public debt instruments, hence the possibility of circumventing the general prohibition of direct lending to governments. As a result, the financial markets are uncertain whether the ECB will or will not intervene in the case where a member government's debt become seen as potentially unsustainable. The normal market tendency is to “test the water” and see what happens. The ECB's refusal to step in during the early phase of the crisis alarmed the markets and forced the countries under pressure to seek help from the IMF and the other member governments. It is only when the ECB stepped in with the full allotment LTRO and OMT programmes that the crisis started to abate.

Several implications follow from these characteristics of the Eurozone.

- First, the ECB could virtually eliminate the risk of a public debt crisis if it were known to act as other central banks do. This is forbidden by the Treaty, and for good reason. The risk is that some member country governments would act as if there were no limit to borrowing, in effect no budget constraint. In the case of the US, or other countries with their own central banks, such behavior would result in large scale creation of money, leading to inflation and a depreciation of the exchange rate, as repeated experience has shown. When the central bank is independent and legally committed to deliver low inflation and a stable value of the currency, the threat of inflation and exchange rate depreciation acts as an effective brake on fiscal indiscipline. In the Eurozone, however, a single government can calculate that it is too small for its indiscipline to lead to Eurozone-wide inflation and to a depreciation of the euro.
- Second, a natural conclusion would be to emulate the situation in the US regarding states and municipalities by preventing the ECB from holding and dealing with national public debt instruments. Since it is not case, the Eurozone finds itself in an intermediate and therefore fragile situation.
- Third, the existence of the ESM means that there is another source of assistance than the ECB. The corresponding moral hazard can only be contained by imposing punitive conditions on countries that seek support. Punishing undisciplined governments (or their successors) may indeed make sense from a moral hazard viewpoint, but the punishment is mostly borne by the population at large, and often by its most fragile members. The political repercussions of such collective punishments, imposed by friendly neighbours and partners, are highly disturbing. As an external agent, the IMF is in a better position to act as a temporary enforcer of discipline.
- Fourth, when the ESM lends to a single country, especially a small one, it can easily borrow or use its resources to provide a limited amount of assistance. If contagion sets in, as it did during the crisis, more countries borrow from fewer countries. One can imagine that contagion spreads because markets calculate that, when all but one countries will have been rescued, the last remaining healthy country will become contaminated, as its loans to other countries will have been financed by repeated borrowings. At this stage, there is no solution but large-scale interventions of the ECB, since the IMF will not have adequate resources. This is a most unlikely outcome, undoubtedly, but so were the Great Financial Crisis and the Eurozone crisis, or Brexit. Failure to prepare for extreme events is always a mistake.

2.4 A natural evolution

At present, the ESM is merely an arm of the Euro area Member States.⁵ Lending and conditionality decisions are taken by the Council after vetting by the Eurogroup Working Group, following negotiations led by the Commission, which involve the ECB and are conducted alongside the IMF. In some countries, the decisions require parliament approval. This is a complicated setup, especially when dealing with a financial crisis that often requires emergency action. The setup reflects the conditions under which the ESM was created, including the then-dominating view that it was meant to be a response to a rapidly spreading crisis that was not supposed to happen. This has led to the revision of the TFEU and the adoption of other legislation designed to strengthen the Stability and Growth Pact (the two pack-six pack). Yet, support for maintaining the ESM and to transform it into an EMF belies doubts about the effectiveness of the new rules. In fact, there is a deep two-way relationship between the Stability and Growth Pact and the existence of the ESM or an EMF, see Section 4.3.4 below.

Regling (2017) suggests that it is natural to undertake a transformation of the ESM into a streamlined and more efficient EMF. As noted above, outside of managing its balance sheet, the ESM has virtually no power on its own. This would not be a problem if the ESM process – deciding to provide support

⁵ It is not an EU institution, therefore not accountable to the EU Parliament and not audited by the EU Court of Auditors.
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to a country, setting up conditions and monitoring compliance – were efficient. A large body of literature concurs that the experience so far has been seriously wanting and that the decision process is largely responsible for the outcome.⁶ This suggests that there is indeed much room for improvement and that this may require transforming the EMS in depth.⁷ However, while urgency and inexperience may explain some of the shortcomings, setting up an emergency lender is an intrinsically challenging undertaking and the challenge is magnified when it is an international lender, and even more so when it is a regional lender.

⁶ Examples of this literature are IEO (2016), IMF (2017), Orphanides (2015), Wyplosz (2014) or Weder di Mauro and Zettelmeyer (2017).

⁷ In-depth changes may require a new treaty. This issue is not taken up in this note as it involves legal and political considerations.

3. THE GENERIC CHALLENGES OF AN INTERNATIONAL LENDER

The seminal case for an international lender was made in Bretton Woods in 1944, and it remains valid today. A country that faces a lack of foreign exchange reserves must be prevented from being forced into effective economic and financial autarky because the costs would be immense and no world economic order could survive a succession of such crises. Over time, the nature of crises has changed. The development of international finance has replaced trade deficits as the main cause of shortage of reserves with capital outflows. Slow-moving and relatively small shortages have been replaced by rapid and large-scale “sudden stops”. International liabilities have been built increasingly less *vis à vis* other governments and more toward private financial institutions. The international lender, the IMF, has had to develop accelerated procedures and to increase its lending capacity. That has been the easy part of adjusting to new challenges.

The bedevilling challenge has always been the moral hazard that goes with rescues. Emergency lending is a form of insurance, and any insurance mechanism creates a moral hazard. Over the decades since the Bretton Woods conference, the IMF has developed a wide array of responses, and is likely to continue to struggle with this challenge. The main responses have been prevention, conditionality and size limits. Each one is appropriate but also faces further challenges.

3.1 Prevention

Short of avoiding the occurrence of crises, prevention can try and reduce their frequency and size. This requires close monitoring, access to relevant information in real time, ability to evaluate the situation, issuing warnings and being listened to. Each of these elements is challenging because most governments would rather not be told that something is going badly and, when told, they often are extremely reluctant to take remedial action, let alone to even admit the existence of a problem. To make matters worse, the moral hazard encourages this kind of behaviour.

Effective prevention operates at the limit of national sovereignty. The international lender’s best chance of success is to combine a carrot and a stick. The carrot can take various forms, such as technical advice or the appointment of officials. The stick is more delicate because it is quickly portrayed as an infringement of national sovereignty. The most often used stick is a non-explicit threat to apply tougher conditionality when and if a loan is eventually needed. Its effectiveness is quite limited. Carrots and sticks can be combined. A good example is the IMF’s Flexible Credit Line (FCL), which promises immediate access to loans for countries that have demonstrated good policies while the countries not selected are implicitly branded as non-cooperative. However, only three countries have accepted so far to apply for the FCL procedure, which undermines the stick effect.

The ESM has established a similar arrangement, the precautionary credit line, which allows for loans without the usual conditionality; this is the carrot. A key difference is that lending is not pre-authorized but conditional on existing economic and financial conditions when the request is made. The stick, therefore, is that non-compliance with the Stability and Growth Pact, enhanced by the two pack-six pack, closes the door to the carrot. An advantage is that it does not require a country to apply in good times, which avoids the stigma effect of the IMF’s FCL. A disadvantage is that an ESM loan under the precautionary credit line procedure requires authorization by the EU Commission and the ECB, a process that can be lengthy at a time when a crisis erupts and requires urgent treatment.

A reasonable conclusion is that prevention is a necessary tool of international lending, but that implementation is highly challenging. In spite of decades of experience all over the world, the IMF has not yet found a way to prevent a government from courting disaster. The failure of the Stability and Growth Pact is another example of the limits of prevention.

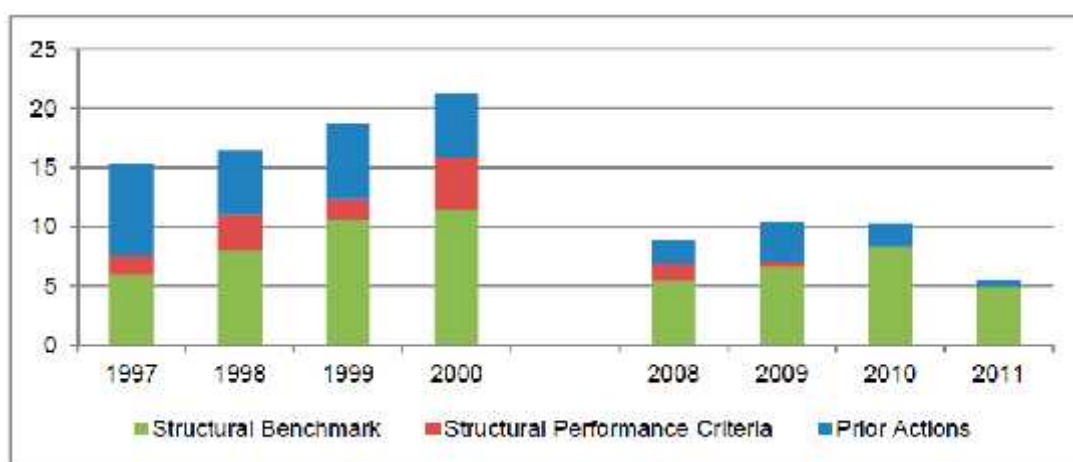
3.2 Conditionality

Conditions set for a loan represent the central tool to limit moral hazard. Conditionality means that applying for a loan implies some loss of sovereignty. In addition, because the conditions are inherently painful, some element of punishment is present. Every country that ever applied for an IMF or an ESM loan remembers it as painful, sometimes humiliating. Indeed, it is not uncommon for conditions to provoke turmoil, including street actions and the fall of the government. It follows that conditionality is universally perceived as ‘political’ in the sense that ‘foreigners’ redistribute income and wealth among citizens, hurting some more than others. Suspicions about the foreigners’ motives naturally arise. These are all symptoms of a temporary loss of sovereignty.

The nature of the conditions matters a lot in this respect. In principle, the conditions are meant to address the economic imbalances that created the need for the lender to intervene. Because the lack of reserves is a macroeconomic syndrome, macroeconomic conditions are natural. They may include fiscal policy measures to restore budget balance, monetary policy actions to bring inflation down and correction of the exchange rate overvaluation. However, quite often, structural weaknesses lie behind the surface and explain why the government has adopted unsustainable macroeconomic policies. In these instances, correcting macroeconomic imbalances will not deliver macroeconomic stability once the programme is over. This is particularly the case within the Eurozone where the exchange rate is not an adjustment tool anymore. An overvaluation requires a reduction of prices, and therefore wages; price and wage flexibility, in turn, often requires structural reforms.

This has led to the addition of structural to macroeconomic conditions, a further infringement of sovereignty. Over the years, the IMF has expanded the list of structural conditions, as did the Troika during the Eurozone crisis. Heavy criticism of structural conditions during the East Asian crisis (Feldstein, 1998) led the IMF to decide in 2002, and further in 2009 to streamline their numbers and to justify them as being ‘macro-critical’. Figure 1 shows that this decision has effectively reduced the average number of conditions included in IMF’s programmes. Clearly, finding the right balance between what makes good economic sense and what is deemed acceptable is a key challenge, with no obvious best answer.

Figure 1: Structural Conditionality in IMF Stand-By Arrangements, 1997–2000 vs. 2008–11
(Number of conditions per programme per year)



Source: Takaji et al. (2014)

3.3 Size limits

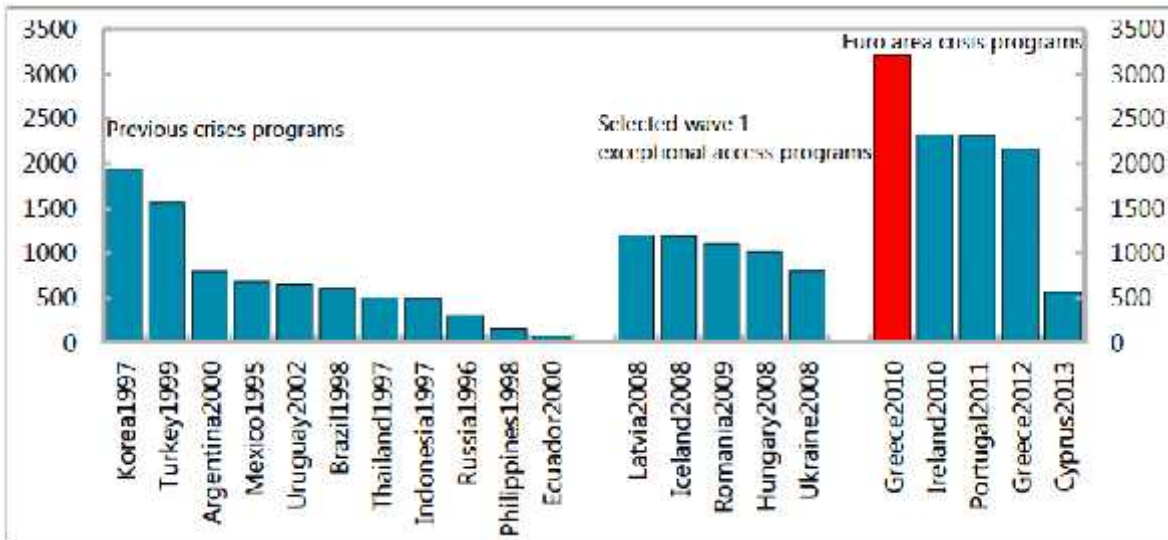
When a country has embarked on an unsustainable path, it will eventually need either to correct the situation or, failing that, seek help from an official lender. The first question is: how much? A country is compelled to ask for help when it is running out of the international reserves while running an external deficit, or because its government cannot borrow any more to finance its budget deficit, or both. The simple answer is that the financial support must be sufficient to finance these deficits until they are eliminated or until it can borrow from the private sector. This is often called the financing gap. In practice, the answer is more complicated. Any deficit can be closed quickly by various means, but this calls for stern measures that always have a detrimental impact on economic activity and on citizens' living conditions. Spreading the hardship over time, to make it less painful and to give time for remedial actions to take effects, is a goal of external lending. Assessing the financing gap, therefore, requires passing judgment on the trade-off between the pain of adjustment and the cost of the program. The literature is rife with arguments in favour and against speed.

Moral hazard is another important consideration. Course correction is always easier when undertaken earlier rather than later, if only because the adverse effects of being on an unsustainable path (domestic and foreign indebtedness, inflation, exchange rate misalignments, wrongly set asset prices, etc.) accumulate over time. Yet, there is strong evidence that policymakers typically delay corrective action and rather apply for help. This moral hazard is one reason why the IMF has set size limits to its loans. Unfortunately, because late interventions require large amounts and because capital mobility has led to increasing rescue needs, it is often the case that these limits are breached under crisis pressure.

Another reason for limits is that lending is always risky. Size limits are a protection against risky lending. In addition, there may be true limits because the lending capacity cannot be expanded. This applies to the IMF and the ESM. Yet, when limits are reached, they can be circumvented. As previously indicated, when faced with very large needs, until the Eurozone crisis, the IMF has often committed to an amount inferior to the presumed financing need and then collected the rest from friendly countries. In every case, the IMF has remained sole in charge. During the Eurozone crisis, a new arrangement has been set up as the ESM – actually, first individual Eurozone countries, next the EFSF and then the ESM – and the IMF have both provided funds and have both managed the rescues. Since the ESM has contributed significantly more than the IMF, its decision power has been dominant. The IMF has accepted this historical arrangement under the condition that its debt be senior to ESM debt.

While such an arrangement reduces the risk borne by each contributor, it leaves the moral hazard untreated or even mistreated. Figure 2 shows the amounts committed by the IMF during its largest rescue operations, expressed as a percent of each country's quota. It shows that the loans to Greece, Ireland and Portugal have exceeded previous records. It is also important to note that the IMF lent only a small part (typically 20%) of the total amounts made available by the Troika. As if to compensate, the Troika has sought very demanding conditions, thus combining financial generosity with severe conditionality. This could be defended, were it not for the fact that countries with initial large debts, such as Greece and Portugal, saw their indebtedness further increase precisely because of the immense size of the loans.

Figure 2: Access to IMF resources (% of quota)



Source: Wyplosz and Sgherri (2016)

3.4 Interest charge

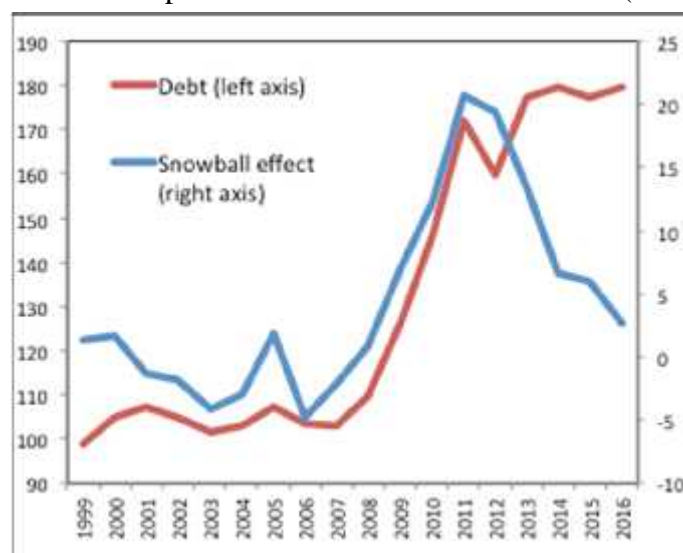
The celebrated “Bagehot rule” for supporting troubled banks is to promptly lend to solvent banks against collateral and at penalty interest rates. Governments are very different economic entities, but the Bagehot principle is often considered as a proper way of thinking about moral hazard in rescue operations. The question of solvency is treated in the next subsection. In international rescues, the collateral is almost never required, since a government collateral is mostly its ability to raise tax revenues.

Regarding interest, the IMF charges the market rate plus a small administrative fee, except for structural programmes specially designed for reforming low income countries, for which the interest rate is virtually nil. Thus, the IMF policy is neither to penalize nor to subsidize. The interest rate is not used to limit moral hazard. The logic, instead, is that the Fund substitutes for loss of market access, at market conditions, and uses surveillance and conditionality to mitigate the moral hazard. During the Eurozone crisis, the EMS has sought to apply the Bagehot principle of a penalty rate. It soon emerged, however, that the combination of a pre-existing large debt, high interest rate and low growth (often negative in many cases) had become a massive source of debt pileup, the well-known snowball effect.⁸ Figure 3 shows how powerful it was in Greece over 2010-12, when the public debt rapidly increased. In the face of a clearly explosive evolution, the Troika changed its strategy radically in 2012. The penalty on the interest rate was brought down from 4% to 0%, the debt held by the private sector was partly cancelled and the debt held by the public sector – by then some 80% of the total – was reprofiled, with a long grace period of 10 years and a considerable extension of its maturity (on average, to more than 30 years).⁹ Similar rebates were granted to the other EMS loans, prompting Weder di Mauro and Zettelmeyer (2017, p.28) to conclude that “by late 2012, European crisis lending had become highly concessional”.

⁸ This is made clear by the budget accounting identity: $Db = d + (i - g - p)b$, where b is the debt/GDP ratio and Db its increase, d the budget deficit as a proportion of GDP, i the interest rate, g the real growth rate and p the inflation rate.

⁹ The IMF conditions were not changed.

Figure 3: Greece: public debt and the snowball effect (% of GDP)



Source: AMECO on line, European Commission

Once again, we see that finding the appropriate balance between conditions designed to stabilize the situation and measures apt at containing the moral hazard of emergency lending is challenging. A natural tendency is to use *the* market rate, as the IMF does, but *which* market rate? During the Eurozone crisis, many countries faced very high market rates, reflecting fears of default. Since a key purpose of a rescue is to calm market jitters, it would seem contradictory to adopt those rates. Adopting the lower rates faced by non-crisis countries, however, amount to a subsidy since the crisis country effectively borrows at a rate cheaper than its own market rate.

A further complication is the risk borne by the lenders and their taxpayers. The IMF takes virtually zero risk as it never offers any concession and always requires seniority status. Throughout its seven decades-long history, defaults on IMF loans have been very rare and mostly circumscribed to countries that face civil or external wars. The European loans, on the other hand, have already been partially written down in present value terms, as described above, through interest rate cuts, extended grace periods and lengthened maturity. Since these loans are financed through borrowings (by governments and the EFSF/ESM) that do not benefit from similar write-downs, the costs are effectively borne by the lenders.

3.5 Debt restructuring

Another aspect of the Bagehot rule is to only lend to solvent entities. For firms, there is a simple, legal definition of solvency based on their balance sheets. Nothing of the sort applies to governments, whose key asset is the ability to raise tax income over the indefinite future. Casual statements about a government being 'bankrupt' miss this simple point and are therefore misleading. This observation represents yet another massive challenge for international lenders. Indeed, two leading proposals (Gros and Mayer, 2010; Weder di Mauro and Zettlemeyer, 2017) emphasize the need for debt restructuring as a key reason for establishing an EMF.

The IMF has tried to respond to the challenge by conducting Debt Sustainability Analyses (DSA). For large – exceptional access – loans, if the calculations indicate that the public debt is unsustainable, the IMF is duty bound not to lend unless the government first restructures its debt, which means that it defaults, at least partially. Since a default results in losses to stakeholders, such a decision cannot be made lightly and should be based on strong evidence.

DSA consists in comparing a government's liabilities, usually its explicit debt, to its assets, chiefly the present value of present and future tax collections. This requires making assumptions about future

income, public spending and tax rates, and to choose the interest rate at which future income is to be discounted, which can be approximated by the whole path of future interest rates on public debt. Since a country, and its government, is expected to exist forever, these calculations must extend into the infinite future; in practice the IMF look at 30 year horizons, sometimes even further out. It stands to reason that forecasts of income growth and interest rates over such lengthy horizons are very hazardous, to say the least. Unfortunately, because of the snowball effect, minor changes to growth and interest rate assumptions result in very large differences in the results. Furthermore, these calculations produce a path for the debt over decades, and one must make a judgment. Is such a judgment at all meaningful? It is inevitably arbitrary, resting as it does on speculative assumptions. In addition, in every country, citizens and firms benefit from entitlements such as pensions or health care, which are legal spending obligations. They should therefore be computed as liabilities, which is rarely done, even though their sizes may well dwarf the existing public debt.

In summary, DSA calculations are extremely fragile, their interpretation is arbitrary and significant components are often ignored. The unmistakable conclusion is that DSA will never be able to provide a clear, black and white answer (Wyplosz, 2011). How then can an international lender decide whether to call for a debt restructuring before agreeing to a loan? Indeed, during the Eurozone crisis, the IMF and the Commission have occasionally reached opposite conclusions. Lending when the debt is too large will create massive risk for the lender and the taxpayers that stand behind it. It will also impose hardship on the borrowing country's citizens to no avail, since the debt problem will remain unsolved. Not lending when the debt is in fact sustainable, on the other hand, means that the very purpose of the international lender is not fulfilled, which will impose suffering upon the country's citizens. One can hardly think a higher-stake decision for an international lender. Given the stake and given the impossibility of a robust evaluation, the quality of the decision rests entirely on the international lender ability to make a good judgment. This is why the quality of lender's management and governance is crucial to its task.

3.6 Summing up

This section has reviewed the many, often daunting challenges faced by any international lender. In a way, lending is easy but dealing with the moral hazard is highly challenging, and there is no magic bullet. Part of the solution comes from the conditions attached to the loan. These conditions should be designed to correct the imbalances that made the loan unavoidable in the first place. In nearly all cases, these conditions are painful and this is why they contain the moral hazard. There may exist a temptation to toughen the conditions, especially structural conditions, to reinforce their deterrent aspect but the IMF experience is that it often backfires.

Prevention is another important way of dealing with moral hazard, but it faces the limits of national sovereignty. There is little that can be done to nudge governments intent on disregarding warning signals and on delaying remedial action as long as possible. Lending limits may convince governments to move faster, but they have to be credible. Here again, the track record is not reassuring. The cost of borrowing from the international lender involves a similar trade-off between the objective of alleviating the pain and dealing with the moral hazard. Here again, there is no agreement on what is the best answer.

Finally, one of the most delicate issues is whether the lender should require a debt restructuring when the pre-existing debt is very large. There is no simple answer, if only because it is impossible to determine whether a debt is sustainable or not. A complicating factor is that a debt restructuring imposes potentially large losses to debt holders, some of which may be governments.

It should be clear, by now, that international lending is a particularly difficult undertaking. The question is whether an EMF is well suited for the task, or whether the IMF is better placed.

4. THE CASE OF A EUROPEAN MONETARY FUND

4.1 Comparative advantages

The “spirit of solidarity” among member countries (formalized in Art.122 (1), TFEU, but not a valid legal basis) was initially given as a “legal/formal justification” for the rescues undertaken during the Eurozone crisis. Indeed, solidarity is likely to be more developed within a region than at the world level. In economic matters, solidarity is likely to be enhanced by deep economic and financial linkages. A serious crisis in one country stands to affect the others, including through potential contagion. It seems therefore natural to provide mutual insurance at the level where it matters most.

In addition, provision, programme design and oversight require an in-depth knowledge of the country. It stands to reason that close and densely related countries have a comparative advantage in acquiring and keeping up to date information about each other. In the case of Europe, the Commission is already well informed about member countries through a great many channels, including enforcement of the Single Market, the Stability and Growth Pact and the associated Macroeconomic Imbalances Procedure. Tapping this information is both relatively inexpensive and efficient. A related information advantage lies within the Eurosystem. The ECB and national central bankers are in frequent communication. This makes it possible for the ECB-based Single Supervisory Board, along with the European Banking Agency, to have detailed and real-time access to information on significant European banks, even though this does not seem the case at this stage.

Finally, throughout the Eurozone crisis, the European Commission and the ESM have acquired knowledge on international lending operations. This was not the case at the outset and could have been an argument to rely exclusively on the battle-experienced IMF. Indeed, it was a key reason why it was seen as necessary to involve the IMF. Institutional learning can be seen as an investment and it is now available to draw upon.

4.2 Comparative disadvantages

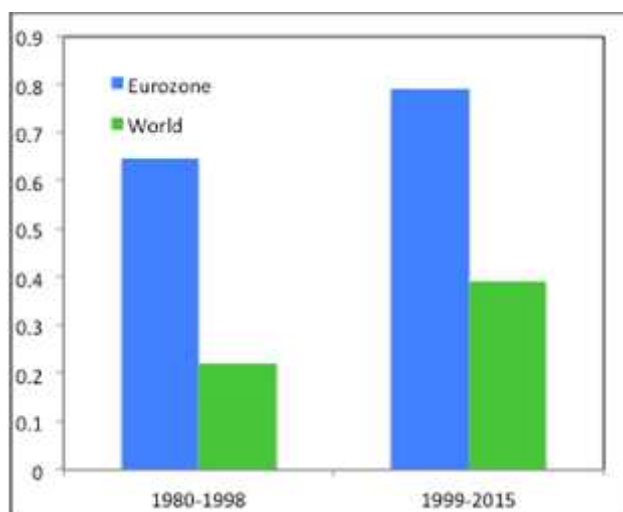
Solidarity may have been a key political argument in favour of a European solution to the Eurozone crisis, but it could not conceal conflicts of interest. It is now widely agreed that, facing crises in several Eurozone member countries, the other members were primarily concerned with protecting their own banks that were significantly exposed. This is why they opposed, and continue to oppose, debt restructuring: it would represent a cost to their taxpayers. Even the debt reprofiling enacted in 2012, as described above, was structured in a way that made it hard to grasp by public opinions, thus avoiding a political backlash. This is not to deny that conflicts of interest do not arise at the IMF. In fact, the IMF accepted to be a junior partner and to bend its exceptional access rule because it wanted to be part of a historical operation after years of quietude. In addition, its main shareholder, the US, was deeply concerned about its own banking system (Blustein, 2016). Yet, given the deep integration that binds Eurozone countries together, the scope for conflicts of interest is very large, not to mention rivalry. In addition, the fact that Eurozone politicians are constantly working together means that they are naturally inclined to make mutual concessions as part of on-going deals. While political deals are not reprehensible *per se*, it represents an additional reason why the EMF stands to be more politicised than the IMF.

A little noted aspect of politicisation is the treatment of a crisis by the media and, more widely, by observers. A remarkable aspect of the Eurozone crisis is that the media have taken a mostly national view of events and of lending conditions. This is not original, much the same happens for most major crises that require international lending. It has been observed at the time of the Mexican crisis in 1982, of the South East Asian crisis in 1997 and of the Argentinean crisis in 2001. In each case, public opinions in lending countries – in these instances, lending via the IMF or direct bilateral lending

orchestrated by the IMF – have been prone to blame the borrowers for inept policymaking or corrupt politics, often both. Yet, within the European Union, sharp comments, to put it mildly, undermine the principles of solidarity and common destiny that underpin the Union. Surprisingly, this bias has even affected the economist profession. While economists are known to be prone to disagree, in this case disagreements have often been along countries of origin. The result has been the growing entrenchment of diverging views among economists, which may have weighed on politicians’ views, and the other way round.

The role of an international lender is to provide insurance to its members. A basic principle of insurance is risk diversification. In the present case, it means that the wider the membership, the more diversified the risk is. Risk diversification is not only achieved through wider membership, but also by insuring events that are little correlated or, even better, negatively correlated. Within a region, especially one where countries are deeply integrated, correlation is likely to be positive and large. Figure 4 confirms this conjecture. Even though national growth rates around the world have become more correlated over time, the correlation is significantly smaller than within the Eurozone. The EMF may therefore find itself facing funding pressure in the front of a crisis, especially if contagion occurs.

Figure 4: Correlation of GDP growth rates



Source: World Development Indicators, the World Bank.

Note: Unweighted average correlation of individual countries growth rates with either the Eurozone or the World growth rates.

The knowledge advantage of an EMF may turn into a disadvantage. Crises are never exactly alike and their treatment must be adjusted to each case. Rightly or wrongly, the IMF prides itself that its decades-long experience of dealing with crises in every part of the world contributes to a unique knowledge that is put to work when facing a new crisis. How critical this IMF advantage may be is hard to assess, but it is a fact that each programme is prepared by the relevant regional directorate and carefully vetted by ‘horizontal’ directorates that are expected to bring experiences gleaned from previous interventions.

Finally, during the crisis, the Eurosystem has faced well-publicized internal conflicts. From the start of its existence, the Eurosystem has recognized the risk of disagreements along national lines within its own ranks. This is why, officially, it only concerns itself with Eurozone aggregates (inflation, growth, financial conditions, etc.) and studiously avoids to take into account national conditions. This rule cannot be maintained when one country finds itself in a crisis situation. The Eurosystem must then look at local conditions and potential repercussions on other member countries. The most glaring example of this conundrum is the evolution of interest rates. In theory, the Eurosystem sets *the* interest

rate that prevails throughout the Eurozone. During the crisis, however, national interest rates have diverged, sometimes by considerable amounts. In this situation, it becomes impossible to think of a common monetary policy. Yet, with only one interest rate to set (its own lending rate against solid collateral), the Eurosystem cannot fine-tune its policy to the needs of every member country.¹⁰ During the crisis, the ECB has often acknowledged this fact. The OMT programme was designed to limit interest rate divergences. The programme has had an undeniable success in this respect, but it also fed sharp disagreements that still linger. There is no solution to this problem inherent to any monetary union, but it raises the issue of the role of the common central bank. It also concerns the EMF, which stands to be pulled apart by diverging national interests in the design of programmes: should it aim only at providing relief to the crisis country or should it take into account the interest of its shareholders?

The IMF itself is not immune to the problem, which it has acknowledged but not resolved (IMF, 2017). Its rule of engagement, however, is to concern itself with the interests of crisis countries. Its shareholders often weigh in, though, hence the frequent complaints about politicisation. Yet, its membership is global, and it is reflected in the composition of the Executive Board, which goes some way toward alleviating the problem.

4.3 Governance

One reason to transform the ESM into an EMF is to improve governance (Regling, 2017). The overly complex, and at times counter-effective, arrangement adopted in the midst of the crisis is the result of conflicting viewpoints and interests that are not likely to be easily brushed aside. This calls for careful and rigorous preparations. Governance must be designed to cope with a number of issues previously mentioned and now examined in more detail.

4.3.1 Moral hazard

The overwhelming importance of moral hazard has been emphasized over and over again in previous sections, which suggests that it is probably impossible to fully eradicate it.¹¹ Moral hazard is challenging because it comes in different guises, which are not always carefully distinguished. There is a *borrower moral hazard*, the temptation to borrow excessively in the expectation of being bailed out in case of acute difficulties. There is the opposite case of a *lender moral hazard*, the temptation to lend excessively in the same expectation that the borrower will be bailed out with no cost to the lender. Noting that borrowers and lenders can be official or private, one can further decompose these two types. These various possibilities are represented by the four quadrants in Figure 5.

The various crises of the Eurozone have involved different types of moral hazard and the treatment of the crises has transformed some types into other ones. At the risk of oversimplification, the figure can illustrate the evolution of the crises. In the Greek case, it started from the case labelled '2' in the figure: the Greek authorities had borrowed excessive amounts from private lenders, including foreign banks. The decision to bail the government out without debt restructuring allowed the foreign private lenders to dispose of a substantial portion of their loans, which ended it up in the hands of both international official lenders, migrating to '1' in the figure, and private domestic and Cypriot banks, still '2'. Portugal was in a similar position. In the cases of Ireland and Spain, the crisis arose from excessive borrowing by firms and households from banks, which correspond to '4' in the figure. When the crisis broke out, the Irish and Spanish governments were prompted to assume much of the distressed loans, moving to '3'. To do so, these governments borrowed the required amounts from

¹⁰ When the monetary union was being mooted in the 1990s, the literature clearly identified asymmetric shocks as the Achilles' heel of a common currency.

¹¹ Rose (1999) notes that the presence of moral hazard is not a reason to dismiss regional monetary funds but a reason to build good funds.

the financial markets, taking us to ‘2’. The resulting massive increase in public debts led to EFSF/ESM interventions, hence a further shift to ‘1’.

Figure 5: Types of moral hazard

		Lender	
		Official	Private
Borrower	Official	1	2
	Private	3	4

Thus the movements are always from the private to the public sector, *on both sides of lending*.¹² The national authorities and the international (official) lender transform private losses into public losses. This primal moral hazard is well known. Yet, as indicated above, the migration across categories has been orchestrated as part of the EFSF/ESM bailouts. In principle, the private lender moral hazard is now contained thanks to the new “bail-in” rule of the Bank Resolution and Recovery Directive that came into effect in January 2016. According to this rule, if a bank needs to be rescued because risky loans are not fully repaid – as would have been the case if Greece had been allowed to default in 2010 on its excessive borrowings – the stakeholders must take the first losses. The adoption of this rule is an important step forward. At the same time, it is an implicit admission that great mistakes were made during the crisis. This makes it even more surprising that explicit debt reductions are not on offer by the official lenders for governments that were forced to assume private loans, as in Ireland or Spain, to prevent their taxpayers from bearing alone the cost of the mistakes.

Both lenders and borrowers must be held accountable for excessive loans, which applies to both public and private lenders and borrowers. The bail-in rule effectively clarifies this point, as far as private lending is concerned, but there is no equivalent rule for public lending, including the international lender. The IMF’s excessive access procedure is designed to prevent the occurrence of such a situation, but the limited reliability of DSA implies that mistakes are likely. In that case, the seniority that the Fund avails itself regarding its loans leaves the borrower to bear alone the consequences of such mistakes. The situation is far worse with EFSF/EMS lending, since there is no excessive access rule. The only safeguard is DSA, which is both highly imprecise and manipulable, as noted above and documented in IEO (2016).

A key challenge for setting up an EMF will therefore be to address this issue. It comes into two parts.

- First, the EMF will need the equivalent of the Fund’s excessive access procedure. It should be prevented from lending large amounts, unless the pre-existing debt is small enough. Defining “large” and “small” is no easy task, but it can be done. If the debt is deemed to be too large, the EMF should be required to subject any fresh loan to a debt reduction of appropriate size. Fortunately, this step is already made reasonably easy by the ESM treaty that requires that all sovereign borrowing include a Collective Action Clause (CAC) clause.¹³ Importantly, given the legacy of excessive official debts accumulated by some countries, mandatory debt reduction must not be confined to private lending. This observation underlines the ever-present conflict between the existence of an EMF and the no-bailout principle.

¹² In the case of Greece, the Greek banks acquired a significant share of loans previously granted by foreign banks, but this was done at the request of the government, which implicitly promised a bailout.

¹³ For reasons well explained in Weder di Mauro and Zettelmeyer (2017), the chosen CACs are not well designed to prevent the holdout problem, whereby minority shareholders can easily block any agreement.

- Second, as explained above, the risk that official loans be excessive cannot be ruled out. This should be recognized with an evaluation procedure that can identify *ex post* a loan as excessive and mandate a debt reduction. This is a delicate step, since the instinctive tendency of any lender is to blame the borrower for not having fulfilled all the conditions (the conditionality issue is taken up in the next sub-section). A proper resolution is to delegate to an independent body the task of evaluating all loans by the EMF. It could even possibly suggest a debt restructuring.

4.3.2 Conditionality

Section 3.2 describes the tendency of the IMF to impose an increasing large number of conditions, especially structural conditions, and how the IMF has endeavoured to buck the trend, with some success. Conditionality is an essential requirement to limit official borrower moral hazard but it can, in fact, increase both official lender and borrower moral hazard. Long lists of conditions leave the borrower to pick and choose the easier conditions, while explaining that it was impossible to enact everything. They also protect the lender if the outcome is disappointing, as it will be possible to find conditions that were not fulfilled and use this as an explanation for any failure of the programme. Structural conditions are especially handy, since they typically are politically difficult. The borrower, who often approves the conditions, can use the programme to pressure domestic opponents. The lender can point to political failures to blame the borrower, even though it well knows that most structural reforms take years to produce favourable results. It is no wonder that conditionality easily proliferates, for wrong reasons.

Parsimony in programme design has much to recommend. It forces both sides to agree on key causes of the circumstances that led to the need for official lending. It leaves no space for the borrower to escape its commitments, while requiring the lender to be precise in its requests. It makes it more likely to achieve programme ownership by the borrower, the Holy Grail of all IMF interventions.

The EMF should adopt best practice and be committed to few, carefully chosen and well-designed conditions. Structural conditions should not be used to force reforms on a reluctant government, no matter how desirable these reforms may be. Structural reforms are politically difficult because they always imply income and wealth transfers among citizens. As such, they are truly a matter of national sovereignty, which should be kept to a strict minimum. The IMF criterion, that structural conditions should be included only if they can be shown as crucial to correct the macroeconomic difficulties that prompted the need for a rescue, is today's best practice.

For those who design rescue programmes, condition parsimony is more difficult than serendipity. It is easy to throw the net wide, drawing up lengthy lists in the hope that they will catch up what is really necessary. Instead, in order to zero in on the essential causes of a crisis, the lender must deploy solid analytical skills, which requires a wide range of competences. As explained above, the IMF rests on extensive internal – and confidential – debates involving many different directorates. The staff analysis and proposals are then put for decision by its Executive Board, which brings together (usually) skilled representatives of the shareholders and which can ask for details and clarification. The Executive Directors further draw on their own staff, who are usually highly competent. Most of the IMF mistakes occur when the Board is not given enough time because of the urgency of the situation.

The EMF's governance must fulfil these requirements. It must be structured into independent divisions (analogous to the IMF's directorates), each with particular areas of competence. Open debate must be guaranteed. The final say must belong to the shareholders, keenly aware that mistakes may lead to losses, as argued in the previous sub-section. While they represent their authorities, the decision makers must justify the position that they take explicitly on the basis of cogent arguments, not political fiat.

For this to be the case, the EMF must be accountable, not just to their governments, but also to the citizens as well. Accountability is deeply rooted in transparency. It can be achieved in many ways, as explained in De Gregorio et al. (1999). The crucial ingredients are the following. All internal debates must be recorded and made available when the programme is concluded. Each programme is to be evaluated by an independent body, which can be set up within the EMF structure like the IMF's IEO, or composed of external experts. The evaluation must be made public, as well as the deliberations of the decision-making body.

4.3.3 The Commission, the EMF, the governments and the Parliament

The respective roles of the European Commission and of the governments is a perennial issue, now extended to the role of the European Parliament. The creation of an EMF will inevitably rekindle these old controversies, as was the case when the EFSF and the ESM were established. In this case, the chosen solution was to put the Commission in the driving seat, but to tie it within the Troika and to leave the final decision to the Eurogroup/Council backed by the Eurogroup Working Group, leaving the EFSF/ESM to execute the financing. This has not been a satisfactory construction. It has led to infighting within the Troika, to considerable secrecy, to an oversight procedure of uneven quality, to heavy politicisation and to occasional blame games.

Quite independently of the question of the relationship with the IMF, which is examined below, the EMF must be structured in a way that makes it possible to deal effectively with a challenging task in an already crowded field. It is possible to envision two polar blueprints. The first one is the creation of a full-blown monetary fund (the EMF), the second one is a beefing up of the ESM.

A full-blown monetary fund would combine the prevention and lending functions. It should be able to fulfil the requirements listed above. It would be a fairly large institution, given a large degree of independence. Its staff should be highly skilled, covering a large array of competences, ranging from macroeconomics to public finance, financial markets, asset management and the relevant legal aspects. It is easy to foresee a number of difficulties. If the EMF is in charge of prevention, how would this mesh with the Commission's responsibilities under the revamped Stability and Growth Pact? The logic would be to transfer these responsibilities to the EMF but that would require wide-ranging treaty changes, as well as predictable opposition by the Commission (and the Parliament?).

It is unclear, therefore, whether the EMF's large staff would duplicate the supervisory function of the Commission – and how divergences would be reconciled – or whether it would be actively used only during crises, which are relatively rare events. A simpler arrangement would be keeping the oversight function within the Commission and arranging for a seamless transfer of information to the EMF. This is unlikely to work.

- First, the repeated experience is that information never flows seamlessly from one institution to another, for classic reasons (confidentiality, house culture, power, etc.).
- Second, the EMF staff would only have second-hand information about member countries, leaving it unprepared to react in real time to an unfolding crisis.
- Third, it would create tensions between the Commission and the EMF at the time of the crisis, the latter blaming the former for poor supervision and, conversely, the former possibly disagreeing with the conditions required by the latter.
- Fourth, the tension between the need for a competent and diversified staff and rare spates of activity would be magnified.
- The current Treaty assigns this task to the Commission (art. 121 and art. 126 TFEU).

Undoubtedly, the governments will want to retain the final say on all matters of importance. Could the model here be the ESM and its Board of Directors? These high-level Ministry Officials are both competent and well in tune with the positions of their countries. However, during crises, the tasks of

the EMF would be more demanding than those of the ESM, so it is an open question whether they would be given the authority to make decisions. On the other hand, it would be a mistake to put the decision in the hands of the Council – or the Eurogroup – because that would lead to unwarranted politicisation. It bears remembering that the Board of Governors of the IMF, the highest authority that brings together ministers or central bank governors, meets once a year. In the meantime, they delegate responsibility to the Executive Board, which meets several times a week (but the Fund oversees 189 countries).

4.3.4 The future of the Stability and Growth Pact

There is another, deeper link between the EMF and the Stability and Growth Pact. Prevention and moral hazard are ill-served if fiscal discipline is lax. The repeated failures of the pact, spectacularly demonstrated by the debt crisis, have not been officially acknowledged so far, but a well-run EMF would not want to bury the issue. Re-thinking fiscal discipline procedures should be a central objective. At the same time, the very existence of the EMF – and, for the time being, of the ESM – would be a permanent source of weakness as it negates the no-bailout clause; this is merely a restatement of the general observation that any insurance mechanism generates moral hazard.

One way of dealing with this issue is to specify the EMF's rules of engagement. As noted, conditionality has a major role to play, but this is an *ex post* treatment while *ex ante* prevention is always better. This aspect is well understood by the IMF, but solutions are difficult to design. One response is *ex ante* conditionality, which means that lending is possible with no or light conditions only for countries that are deemed to have demonstrated adequate fiscal (and monetary) discipline. The resulting Flexible Credit Line (FCL) facility, however, has not taken off. In the Eurozone, it might be easier to achieve and indeed, the ESM has already set up the precautionary credit line as mentioned in Section 3.1 above. Following this antecedent, the EMF could treat differently countries that are in good standing with the Stability and Growth Pact (as Ireland and Spain were at the time of the crisis) from those that are not (as were Greece and Portugal).

A more direct and more desirable approach is to put in place robust fiscal discipline procedures. From the start, the Stability and Growth Pact has been struggling because its implementation runs against the fact that fiscal policies are part of national sovereignty (Wyplosz, 2013). This is a familiar feature among federal states. The usual solution, as adopted in the US and Switzerland for instance, is to fully decentralize the responsibility for achieving fiscal discipline (with an unbreakable balanced budget law at state level) **and** to make the no-bailout rule credible¹⁴. The crucial element of the fiscal discipline armoury of the Maastricht Treaty is the no-bailout rule but it has lost all credibility when it was overlooked during the crisis. The *de facto* discarding of the no-bailout rule was meant to be compensated by the Fiscal Compact provision that each Eurozone member country designs a structural fiscal balance rule to be written into its constitution. Not all countries have adopted a well-designed rule and not all have included it into their constitutions. It is difficult to overstress that the very existence of the EMS and of a future EMF is a contradiction with the no-bailout rule for the simple reason that these are institutions primarily created to provide bailouts.

4.3.5 The role of the Eurosystem

The ambiguity of the Eurosystem at crisis time is presented in Section 4.2. During the crisis, the IMF has been blamed for accepting that the ECB “sits on the wrong side of the table” as part of the Troika, in contrast with the usual procedure whereby the IMF faces a government and its central bank (IEO, 2016). The problem arises because the euro is in many respects a “foreign currency”, as explained in

¹⁴ Importantly, this is not the solution adopted in Germany and, indeed, several Länder exhibit very large public debts. In many respects, the Stability and Growth Pact has been inspired by the German model. For the relevance of the US model for the Eurozone, see Henning and Kessler (2012). It can also be noted that debt levels in US states are low while some German Länder are saddled with very high debts.

Section 2.3. Even though the ECB has generally limited its role within the Troika to financial issues, it has been part of negotiations that dealt with fiscal policies and structural reforms, issues that are explicitly not part of its mandate. As noted above, the ECB has also been at the forefront of the fatal initial decision not to allow Greece to default, as well as to require that the Irish government guarantee all bank deposits, which increased its public debt by 32% of GDP virtually overnight.

The situation is made even more complicated by the fact that the newly created single supervision mechanism for the significant banks in the euro area has been set up under the ECB, and that the supervision of smaller banks is delegated to national supervisors. The treatment of banks during a crisis is often a key issue and, as such, it frequently figures among the conditions for a loan agreement. When the supervisor is a government agency, the conditions are part of the negotiations between the lender and the government. When the central bank is the supervisory agency, it sits alongside the government. This suggests that the ECB should be on the side of the government, not that of the lender.

A related consideration is that central banks are de facto lender of last resort to their banking system. Within the Eurozone, this is the ELA function of the Eurosystem. As previously indicated, the ELA procedure leaves all the risks to the national central bank and therefore to the local taxpayers. ELA interventions and potential bank resolution must be therefore negotiated between the national central bank and its government. However, the Eurozone has also set up a Single Resolution Authority, which is to set all the parameters of any bank resolution in accord with the national authority. This is too cumbersome a procedure to function well and it will have to be modified. It further complicates how lending conditions should be negotiated and how ELA interventions should be decided. Formally, ELA is decided by the Eurosystem, which requires negotiations with the government in question. For this reason, the ECB must sit on the side of the lender.

It is difficult to imagine a perfectly satisfactory resolution of this conundrum. Since each Eurozone country is equipped with its own central bank, one could imagine that the ECB sits on one side of the table and the national central bank on the other side, along with its government. Unfortunately, this is likely to be impractical since national central banks do not have any autonomy within the Eurosystem. It might even be hurtful if it were to pitch one national central bank against the others.

4.4 Relationship with the IMF

A key reason why the proposal to set up an Asian Monetary Fund was rejected was that it would undermine the IMF. To recall, the fear was the regional fund would offer softer conditions than the IMF, which would increase the borrower moral hazard. It could also increase the lender moral hazard if the regional fund were acting to protect regional banks and financial institutions. The Chiang Mai Initiative, which is the scaled-down version of the Asian Monetary Fund, has won acceptability by formally subjecting its interventions to IMF approval. Any regional monetary fund must therefore define its relationship with the IMF.

The Eurozone experience differs from the Asian one. As a minority contributor to the Eurozone rescues, the IMF has been side-lined. Its main bargaining power came from the fact that the ESM treaty requires that its loans be coordinated with IMF loans 'wherever possible'. In July 2015, this has proven to be impossible in the case of Greece and Europe is now on its own, officially waiting for the IMF to come along. Unsurprisingly, the disagreement concerns the sustainability of the Greek government debt. The IMF claims that it is not sustainable and will not lend until it is restructured. The Commission considers that previous restructurings have considerably reduced debt service through the reprofiling of debt service, which is true but is not the same as debt sustainability. At any rate, the Troika arrangement has been suspended and may never be reinstated.

Greece has always been a category on its own. Can we draw some general lessons from the Eurozone so far? In particular, are the EU institutions softer than the IMF? The answer is mixed. The evidence is that, initially, the EU Institutions were generally tougher on the conditions associated to the rescue plans and in the interest rates that the ESM charged. Having rejected any notion of debt restructuring, the EU Institutions have pushed for front-loading ambitious deficit reducing measures. It has also seized on the occasion to push through structural reforms that it had long advocated. On the other hand, the interest rates have then been slashed to virtually nil, so that the ESM is now much softer than the IMF. This suggests that the Eurozone lending programmes started as too tough on both conditionality and lending rates, but eventually had to retreat somehow. Lending rates were slashed along with implicit debt restructuring, an admission that it would have been better to restructure some debts *ex ante*. If anything, the non-financial conditions have been made stricter.

A plausible conclusion is that the European lending arm is not undermining the IMF with softer conditions, but with its readiness to lend large amounts against tougher conditions. In doing so, the Eurozone puts greater emphasis on the borrower moral hazard by imposing demanding conditions, than on the lender moral hazard, by rejecting *ex ante* debt restructuring. This choice could be ascribed to the interests of the lending countries that dominate the decision-making process, since there are fewer borrowers than lenders. Thus, the competition between the Eurozone lenders and the IMF concerns the overall philosophy. A future EMF will have to refine its strategy. The IMF's strategy has been informed by a long experience, the Eurozone now has its own experience, from which to learn and clarify how it intends to compete with the IMF.

It remains to be seen whether this is true competition. It would be if the countries in need of loans could choose freely between the IMF and the EMF. The experience during 2010-12 is that the crisis countries of the Eurozone were under pressure not to apply for loans directly from the IMF, where the European countries wield a blocking minority position (Blustein, 2016). The ECB was also instrumental, given its control over ELA and, more generally, its money creation power. Thus, the EMF must decide whether it intends to compete with the IMF or whether the IMF will be the required first port of call in case of a crisis.

5. CONCLUSIONS

When we have an IMF, why should we build an EMF? The official reason is that the IMF does not have the resources to deal with the need of advanced economies that are economically larger than the traditional 'customers' of the IMF, especially in view of the huge needs required to deal with financial flows among wholly integrated countries. This is not a valid argument, though. Until the Eurozone crisis, the IMF could collect loans from friendly countries while remaining in charge of all aspects of rescue operations. The Eurozone can follow this practice without setting up a full-blown EMF. All it would need is a financing arm to be mobilized at crisis time, without building an institution that has the manpower to negotiate and enforce conditions. The ESM is available. All that is needed is that its governance be made lighter to allow for rapid and efficient contributions.

The only fundamental reason for the setting up of an EMF is to be able to make do without the IMF. This is a political reason, which is pretty much what motivated in time of crisis the supporters of the Asian Monetary Fund (Rose, 1997). Can the IMF block again the emergence of a competitor? In 1997, the US and the European countries, which jointly are majority shareholders, were united in refusing the creation of an Asian Monetary Fund. The US and the non-European countries might attempt to block an EMF but it remains to be seen whether they want to and, if so, whether they can succeed. An alternative scenario is that they let an EMF emerge as a precedent for further regional monetary funds. Such an evolution would represent a major transformation of the international monetary system.¹⁵

That an EMF is politically possible does not mean that it is economically desirable. A key argument in its favour is that it would allow the Eurozone to improve upon what was created in the midst of a crisis. This is not a strong argument either. The record of the European rescue operations is mixed, so improvement is needed indeed, but the alternative is to dismount the construction once it has completed its mission and can close its books, and rely on the IMF should the need arise again. The natural tendency of institutions is to never die, but this tendency should be resisted if there are good reasons to close it down. Fixing the ESM is not a good enough reason.

This paper has shown that the creation of an EMF would be a more complex undertaking than meet the eyes. The various types of moral hazard loom large. Over past decades, the IMF has struggled to find a balance between emergency support and moral hazard; it is likely to struggle further over the decades to come. The EMF would have to climb up the learning curve under more challenging conditions, because the national interests are deeply entangled within such a tightly integrated region. Finding the right governance structure, defining the role of the Eurosystem in its functions as a collective central bank and a commercial bank supervisor, delineating the attributions of the EMF and the Commission and specifying the relationship with the IMF are challenging issues.

It is also important to take into account the need to equip the EMF with a high quality staff, because dealing with a crisis is technically one of the most daunting tasks that an economic institution can face. With few countries to deal with and with crises (hopefully) infrequent and far apart, the EMF would have to maintain its staff occupied and in shape, like fire brigades do. One solution, examined above, would be to transfer the economic supervision tasks currently performed by the Commission to the EMF. Even then, a concern is that supervision and crisis management are different exercises. Simulating emergencies keep fire brigades fit, but would that work for a monetary fund?¹⁶

¹⁵ Weder di Mauro and Zettelemeyer (2017) offer an analysis of such a modified system.

¹⁶ Lack of fitness was a concern at the IMF during the benign decade of the Great Moderation that preceded the Great Financial Crisis.

REFERENCES

- Blustein, Paul (2016) *Laid Low*, Mc Gill-Queen's University Press.
- De Grauwe, Paul (2012) "The Governance of a Fragile Eurozone", *Australian Economic Review* 45(3): 255-268.
- De Gregorio, José, Barry Eichengreen, Takatoshi Ito and Charles Wyplosz (1999) "An Independent and Accountable IMF", *Geneva Reports on the World Economy* 1, CEPR, London.
- Feldstein, Martin (1998) "Refocusing the IMF", *Foreign Affairs* 77: 20-33.
- Gros, Daniel and Thomas Mayer (2010) "How to Deal With Sovereign Default in Europe: Towards A Europe(an) Monetary Fund", VoxEU, 15 March.
- Henning, C. Randall and Martin Kessler (2012) "Fiscal Federalism: US History for Architects of Europe's Fiscal Union", Working Paper 12-2, Peterson Institute for International Economics, Washington D.C.
- IEO (2016) "The IMF and the Crises in Greece, Ireland, and Portugal", Independent Evaluation Office.
- IMF (2017) "Ex-Post Evaluation of Exceptional Access Under the 2012 Extended Arrangement", International Monetary Fund.
- Katada, Saori (2001) *Banking on Stability*, Michigan University Press, Ann Arbor.
- Orphanides, Athanasios (2015) "The Euro Area Crisis Five Years After the Original Sin", MIT Sloan Research Paper No. 5147-15.
- Regling, Klaus (2017) "Grexit is not an option for me", *Süddeutsche Zeitung*, 25 February (in German).
- Rose, Andrew (1999) "Is There a Case for an Asian Monetary Fund?", *Federal Reserve Board of San Francisco Economic Letter* 37.
- Takaji, Shinji, Carlos De Resende, Jerome Prieur, Franz Loyola and Tam Nguyen (2014) "Review of Crisis Management Programmes Supported by IMF Stand-By Arrangements, 2008–11", Independent Evaluation Office.
- Weder di Mauro, Beatrice and Jeromin Zettelmeyer (2017) "The New Global Financial Safety Net", *Essays on International Finance* 4, Center for International Governance Innovation, Waterloo, Canada.
- Wyplosz, Charles (2011) "Debt Sustainability Assessment: Mission Impossible", *Review of Economics and Institutions*, 2(3): 1-37.
- Wyplosz, Charles (2013) "Europe's Quest for Fiscal Discipline", *European Economy Economic Papers* 498.
- Wyplosz, Charles (2014) "The Eurozone Crisis: A Near-Perfect Case of Mismanagement", *Economia Marche Journal of Applied Economics* 33(1): 2-13, June 2014.

- Wyplosz, Charles (2016) “The Six Flaws of the Eurozone”, *Economic Policy* 31(87): 559-603.
- Wyplosz, Charles and Silvia Sgherri (2016) “The IMF’s Role in Greece in the Context of the 2010 Stand-By Arrangement”, Background Paper 16-02/11, Independent Evaluation Office, IMF.

