The Cost of Non-Europe of an incomplete Economic and Monetary Union

STUDY

COST OF NON-EUROPE

The Cost of Non-Europe of an incomplete Economic and Monetary Union to prevent future crises

Research paper
by Dr. Sc. Marius Cristian Frunza

Abstract

The purpose of this study is to evaluate the robustness of a strong economic and monetary union faced with a new crisis scenario. We have designed an empirical statistical model that includes, from a behavioural perspective, the relationship between the characteristics of the financial markets, the macroeconomic indicators and the accounting data of the financial institutions in the 28 Member States of the European Union. By simulating the parameters of the model in the event of a new crisis, we highlight the crucial role of an efficient and integrated functioning of the European Union with a view to limiting the losses generated during a major economic and financial crisis. From the perspective of a new sovereign crisis, improved budgetary coordination between the countries of the EU should generate savings of around €85 billion, i.e. 0.65 % of the European Union's GDP. Under the same scenario, a functioning banking union would make it possible to save €222.3 billion, mainly engendered by a reduced need to recapitalise the EU's financial institutions.

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Summary

The impact of the recent crisis and the variety of its effects on the Member States of the European Union have raised numerous questions concerning the Union's efficiency and the measures capable of improving its efficiency from an economic and monetary standpoint.

The purpose of this study is to evaluate the robustness of a strong economic and monetary union faced with a new crisis scenario. We have designed an empirical statistical model that includes, from a behavioural perspective, the relationship between the characteristics of the financial markets, the macroeconomic indicators and the accounting data of the financial institutions in the 28 Member States of the European Union. By simulating the parameters of the model in the event of a new crisis, we highlight the crucial role of an efficient and integrated functioning of the European Union with a view to limiting the losses generated during a major economic and financial crisis. From the perspective of a new sovereign crisis, improved budgetary coordination between the countries of the EU should generate savings of around €85 billion, i.e. 0.65 % of the European Union's GDP. Under the same scenario, a functioning banking union would make it possible to save €222.3 billion, mainly engendered by a reduced need to recapitalise the EU's financial institutions.

Cost of 'non-EU'	Scenario of a sovereign crisis		Scenario of a financial crisis		Current estimate[1]
	€bn	(%)	€bn	(%)	(€bn)
Improved budgetary coordination	85	0.65 (GDP)	58	0.45 (GDP)	31
Common deposit guarantee scheme	32.5	0.25 (GDP)	64	0.49 (GDP)	30
Banking union in a new crisis	222.3	1.71 (GDP)	195	1.5 (GDP)	35

Table 1: Estimates of the cost of 'non-Europe'

The main results of the study are shown in Table 1. The costs obtained in this study are estimated on an annual basis and represent non-recurring costs capable of being saved at a time when the sovereign/financial crisis occurs over a one-year horizon.

Thus improved budgetary coordination at European Union level would make it possible to save 0.45 % of GDP in the event of a financial crisis. The cost of 'non-Europe' linked to the establishment of a common deposit guarantee scheme represents €32.5 billion in the event of a sovereign crisis, and €64 billion in the event of a financial crisis. The role of uniformly applied banking regulation in the 28 Member States would make it possible to save 1.5 % of GDP in the event of a financial crisis, mainly by limiting the impact of the credit crunch on growth.

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[1] Mapping the Cost of Non-Europe, 2014–19, European Parliamentary Research Service, 2014.

The study also identified a number of ways to improve the EU's prudential framework that could strengthen the effectiveness of the European Union and better prepare the economy to cope with a crisis: optimisation of capital flows within the EU, the role of rating agencies, the role of portfolios of derivatives, the role of pooled clearing and bailout mechanisms.

PREAMBLE

This study aims to determine the cost of non-Europe in a certain number of scenarios associated with the completion of economic and monetary union on the one hand and the occurrence of crises on the other.

It includes a qualitative part, which is legal in nature, listing a certain number of current shortcomings in the completion of economic and monetary union.

The study continues with a quantitative analysis. In this part, for each legal situation studied, we translate the assumptions of efficient or deficient union into economic variables. We then consider one or more crisis situations. The cost of the crisis scenario is then calculated, chiefly in terms of impact on the European Union's GDP, under two assumptions: that of an efficient Europe then that of a deficient Europe. The scenarios studied correspond to extreme situations that happen once in a century. The study concludes with the difference between these impacts, depending on whether Europe is efficient or deficient. This is what we call the cost of non-Europe.

Over and above the detailed results, we wish to propose lines of argument that make it possible to assess a complex reality. We think these lines of argument are capable of clarifying policymakers' choices.

LEGAL ANALYSIS

The violent financial crisis that hit the European Union starting in 2008, and which spread throughout its economy, occasioned extremely high costs for citizens, enterprises and states. The Member States have supported their financial sectors, often on a very large scale, leading to increased pressure on their public finances and a rise in their indebtedness. At the same time the sovereign debt market in a number of euro zone states has been subject to very great pressures. This has resulted in a vicious circle linking banking risk and sovereign risk.

This dual crisis has, however, represented an opportunity to create European instruments which have probably limited the realisation of even more serious effects (contagion, etc.) and which, for the future, should prevent the return of similar cataclysms or at least minimise their impacts.

The aim of these developments is to offer a succinct panorama of the main instruments in question. The aim of the first instrument is to strengthen the pre-existing economic and budgetary coordination between Member States. Three other instruments seek to prevent banking crises and to break the link between banking risk and sovereign risk and, more generally, to end the process of financial fragmentation within the euro zone and to complete the integration of the internal market in the area of financial services.

Strengthening economic and monetary cooperation (first instrument) is intended to be a remedy for an original weakness of economic and monetary union: monetary policy is federal in the euro zone whereas economic and budgetary policy is not. The growth in the sovereign debt of a number of states is capable of harming the sovereign debt of other states and the Union in general. To cope with this, the stability and growth pact, which is a set of legal rules (including the six pack, the two pack and the treaty on stability, governance and cooperation) – and includes a preventive section and a repressive section –, imposes convergence criteria (government deficit limited to 3 % of GDP and gross government debt limited to 60 % of national wealth) with a view to ensuring the stability of economic and monetary union.

As regards the preventive section, the budget proposals of the Member States of the euro zone are henceforth all kept to the same adoption and dialogue timetable with the competent European bodies. They must henceforth incorporate independent macroeconomic forecasts and, to a certain extent, be overseen by an 'independent organisation charged with monitoring budgetary rules'. These proposals must meet the conditions of the 'medium-term objective' (MTO) specific to each of them, although all MTOs have a common aim, namely budgetary equilibrium in structural terms, while at the same time leaving scope particularly for public investment. Any deviation by more than 0.5 % of GDP from the MTO brings about supervision on the part of the Commission and the Ecofin Council. Except in cases where the state in question has been granted a respite, supervision may lead to sanctions unless the deviation is corrected. Furthermore, certain departures from the MTO are accepted if structural reforms have a positive long-term impact on public finances or if elements arise beyond the state's

control. If the deficit exceeds the threshold of 3 % of GDP or if debt represents more than 60 % of GDP (and does not fall at the rate of one-twentieth per year over an average of three years), an excessive deficit procedure is opened by the Council on the recommendation of the Commission. This procedure includes precise timetables, which may, however, be adjusted, and detailed corrective measures. Sanctions may be adopted if the excesses persist. To guarantee effective application of this system (and its dissuasiveness), it is stipulated that once the procedure is under way, the stages and therefore the sanctions are linked together in a 'programmed' manner; however, each decision of the Council, which at all times relies on a detailed report from the Commission, follows an in-depth deliberation by the Council and benefits from a margin of discretion.

This control in terms of public finances has been strengthened by oversight of macroeconomic imbalances (private debt, changes in the prices of real property, current account) and oversight of major employment trends (unemployment, youth unemployment, earnings index). The indicators related to competitiveness gaps, contraction of domestic demand, erosion of human capital, and sovereign and banking default risk factors are at the heart of the examination of national situations thanks to the supervision dashboard whose harmonisation could, in passing, be further increased.

However, this arrangement as a whole, a sort of economic proto-government of the Union and the euro zone, suffers from a certain number of limits. It risks drifting towards a formal exercise in which observance of the (complex) procedures would take priority over the aim that it is meant to serve. The approach in terms of sanctions, which is above all meant to be dissuasive, ultimately risks being ineffective, as has been the case before. Finally, the employment dimension is taken into account only in terms of costs and not as a productive factor that could be advanced for example in cases of preservation and promotion of human capital.

A more preoccupying point, though, is that it is not certain that this arrangement, even if it does represent a real improvement on the earlier situation, will offer guaranteed protection against shocks of the type and intensity of those examined by this study (sovereign crisis, financial crisis). This is because it lacks a mechanism intended to ensure greater financial stability of the euro zone by offering a certain degree of pooling of financial risks. This could take the form of the possibility of joint borrowing or at least of jointly guaranteed borrowing, which would involve a high constraint on the national sovereignty at stake (ex ante veto on the budget of the borrower state in the event of a national macroeconomic crisis that risks impacting on the entire zone). Furthermore, a supranational financial assistance programme should also be provided in cases where a given state finds it impossible to obtain market funding, which would involve a still larger transfer of sovereignty on its part, at least during the necessary time. In both cases the funds whose mobilisation would be necessary for financial stability would therefore be at European level and could those of the European Stability Mechanism (see below). From an institutional standpoint, both these mechanisms presuppose the creation of a financial executive for the euro zone accompanied by ad hoc mechanisms to oversee the democratic legitimacy of its action. In the event of a shock or shocks, the costs involved,

at the current time, by non-realisation of these financial stabilisation mechanisms are estimated in the line *Improved budgetary coordination* of the second section of this study.

The second instrument adopted by the EU constitutes the 'solidarity' strand of the reforms and includes a set of financial assistance measures to help states most in difficulty. Taking over from emergency arrangements, the European Stability Mechanism (ESM) was created in 2012, on the basis of an international treaty, in the form of an intergovernmental body specific to the euro zone whose seat is in Luxembourg. Its aim is to help (stabilise) any member state having difficulty accessing the market for funding. It provides the member state with a range of financial assistance instruments while at the same time requiring rigorous national adjustments in return. It is itself financed by direct contributions from the Member States of the euro zone (€80 billion in all), such contributions being the minimum to enable it to raise funds from other sources in order to achieve the fire power of €700 billion deemed necessary to cope with any future sovereign crisis. This undeniable success suffers, however, from several limits, one of which is of particular concern: the ESM's ability to intervene has probably been underestimated. Furthermore, the mechanism would gain by seeing its powers evolve in a preventive direction by being able for example to implement stability plans in the event of structural difficulties in the economies of the euro zone, improvement in competitiveness or assistance with structural reforms.

Third, the EU has also intervened to sustainably guarantee the financial stability of the Union in its entirety by means of much more integrated European financial legislation than before. In particular, the Capital Requirements Regulation and Directive – CRR/CRD IV – of June 2013 established a set of harmonised prudential rules applicable to all the credit institutions in the Union. These rules make it possible to overcome the deficiencies uncovered in the preceding legislative generation and to ensure as uniform an application as possible in all the countries of the Union of the new Basel III prudential standards. New European agencies created in 2010, known as supervisory authorities, are charged with drawing up the implementing legislation and the soft law (single rulebook) related to this new generation of legislation: European Banking Authority, European Insurance and Occupational Pensions Authority, European Securities and Markets Authority, European Systemic Risk Board. Apart from the prudential rules, other advances have been made in terms of financial regulation in the broadest sense of the term, particularly as regards over-the-counter derivative products (with the creation of trade repositories and clearing houses, EMIR regulation) and central securities depositories (CSDR regulation). However, many important recommendations of the 2012 Report of the European Commission's High-level Expert Group on Bank Structural Reform (Liikanen Report) have still not been acted upon, especially those related to the prohibition on proprietary trading by banks, the separation of deposit and lending activities from market intervention, and the regulation of shadow banking. The costs entailed in the event of a crisis by the failure to implement these last reforms are estimated in the line *Banking union in a new crisis* of the second section of this study.

Fourth, faced with the risk of financial fragmentation within the euro zone, the creation of a genuine banking union was decided upon in June 2012. This union itself comprises three strands: single supervision, single resolution and a deposit guarantee scheme.

Single supervision consists in entrusting the supervision of credit institutions (in other words verifying application of the common rules mentioned above) to a single authority, the European Central Bank, as distinct from the preceding period when it came under the various national banking regulatory authorities. From November 2014, this supervision will relate to the main banking institutions in the euro zone, i.e. 80 % of this zone's bank assets, as well as those established in Member States of the European Union wishing to participate. Furthermore, a genuine hierarchical power has been entrusted to the European Central Bank with respect to the national banking regulatory authorities, which continue to exist and are charged with a subsidiary supervisory power. Before exercising its supervision, the ECB conducted a complete valuation of the balance sheets of the banking institutions to be placed under its direct supervision, along with stress tests, carried out jointly with the European Banking Authority. The results, known at the end of October 2014, showed that out of the 120 banking institutions examined, 25 were undercapitalised to the tune of €25 billion and needed to take corrective measures. For Member States that are not part of the euro zone, supervision continues to be conducted by the national banking regulatory authorities under the coordination (and in a few rare cases under the oversight) of the European Banking Authority but always in accordance with common prudential rules. This single supervision is a priori one of the strongest links of banking union. However, its success (in other words its effectiveness and medium-term credibility) will depend on the way in which it is implemented. Above all, as a first step, the way in which the valuations and stress tests are conducted and the way in which the ensuing results are taken into account will come under the closest scrutiny.

The second strand of banking union consists in putting in place common rules related to the treatment (resolution in the most dangerous cases) of banking institutions facing the threat of collapse and presenting a systemic risk. The Bank Recovery and Resolution (BRR) Directive adopted on 15 May 2014, standardises the rules applicable to the entire Union in this area and introduces the fundamental principle of a bail-in of banks, requiring the contribution from shareholders, creditors and non-guaranteed deposits above €100 000 before the mobilisation of other resources, particularly public funds (bailout) and therefore taxpayers, henceforth regarded as a last resort and not immediate as before. Solely for Member States of the euro zone, a single resolution mechanism, adopted on 14 July 2014, was added. It institutes, in particular, a single resolution council, charged with drawing up treatment/resolution plans for banks placed under the direct supervision of the ECB and with conducting their resolution procedure. At the same time a single resolution fund was created to finance, subject to conditions, the banking resolution measures of banking institutions situated in participating states. This fund must correspond to 1 % of the amount of the deposits covered by all the credit institutions situated in participating states but this is undoubtedly too far into the future (2024). Still in the future, it must be neutral for public finances, in the sense that public payments are exactly offset by levies on the banking sector itself in accordance with the *bail-in* principle. This single resolution mechanism is in itself a clear advance on the earlier situation since it creates a relative pooling of risks between participating states. It does, however, have three weaknesses. The decision-making procedure seems too complex when experience has shown that it needs to be very quick; more than half a dozen bodies, both European and national, are in effect involved. The duration of the transitional phase left on the one hand to banks and on the other to participating states

(to contribute to the single resolution fund) is too long. Finally, the overall amount of this fund is probably too low. The cost of these inadequacies is included in the line *Banking union in a new crisis* of the second section of this study.

The third strand of banking union consists in the deposit guarantee scheme. The directive adopted on 16 April 2014 confirms the pre-existing principle of the protection of deposits less than €100 000 (directive 64/2009) and in particular introduces the obligation, for all Member States of the Union, to create a national deposit guarantee fund, topped up using ex ante contributions from banks, to indemnify depositors in the event of a bank failure. Advances have therefore been made as regards harmonisation of legislation on deposit protection. More advanced integration in the matter, which could take the form of a single guarantee fund, still remains to be tackled. In the meantime, this absence will have a fairly high cost in the event not only of a sovereign crisis (€32.5 billion) but also of a financial crisis (€64 billion) based on the estimates in the line *Common deposit guarantee scheme* of the second section of this study.

The four instruments presented above constitute considerable advances on the preceding situation of economic and monetary union. However, this new version of EMU is still incomplete either because key elements are still missing (like a common deposit guarantee scheme) or because what has been implemented has room for improvement (like economic and budgetary coordination or the single resolution mechanism and fund). The aim of the work below is to indicate possible sources of savings, realisable in the short to medium term, concerning improvement in these recent instruments.

INTRODUCTION

I – Background

The recent crisis began with the upheaval on the US credit market and quickly spread to the European and Asian markets and their respective economies. Within the European Union, the impact of the crisis reflects the extreme variety of economies and financial systems. Thus the financial crisis generated not only an economic crisis but also a crisis of confidence in relation to the European states and the reliability of the European Union. The euro zone crisis of 2011 produced a massive dislocation of the European markets and of the economies and highlighted the weakness of European reflation. Taking the sovereign debt crisis in Greece as a leitmotiv, we first stress the weakness of the European Union as an economic union. Thus a disruption of small peripheral economies can generate a massive contraction in the entire European economy.

To stress the many weaknesses of economic and monetary union, we evaluate the differences in the impact of the crisis and the recovery between the United States and the European Union. At the dawn of the euro zone crisis, Greece, with an economy that represented just 1.4 % of total EU GDP, got into dire financial straits that affected the entire European Union to such a level that the very existence of the euro was threatened. Amplification of a distress signal in one of the Member States very clearly showed that there were weaknesses in the prudential frameworks and in the governance of the European Union. The EU needed to invent an ad hoc solution to rescue Greece. The absence of banking union and a limpid rescue process plunged the EU into the crisis that began in 2008. When the Greek crisis was in the process of spreading within the EU, the collapse of the State of California did not threaten the sovereign rating of the United States whereas the Californian economy represented 12.4 % of US GDP.

Figure 1 shows the change in the credit cycle[2] in the United States and the European Union over the last decade. The graph shows that the change in the two credit cycles was similar during the crisis and in the initial phase of the recovery. Nevertheless, a structural breakdown in the relationship between the two cycles appeared in 2011. Afterwards, the North American credit cycle was consistently on an uptrend while the European cycles dived into a double dip, thereby generating a less strong recovery.

In Figure 2, we analyse, on a relative basis, the change in GDP in the countries of the European Union. The recovery in the United States is seeing a strong uptrend while the Member States of the EU have not, since 2011, managed to generate sustained growth.

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[2] The credit cycles were calculated with the help of Moody's KMV 'Probability of default' for enterprises in the United States and the European Union. We calculate the aggregated value of the distance to default (defined as $DD = N^{-1}(PD)$) in both the EU and the United States.
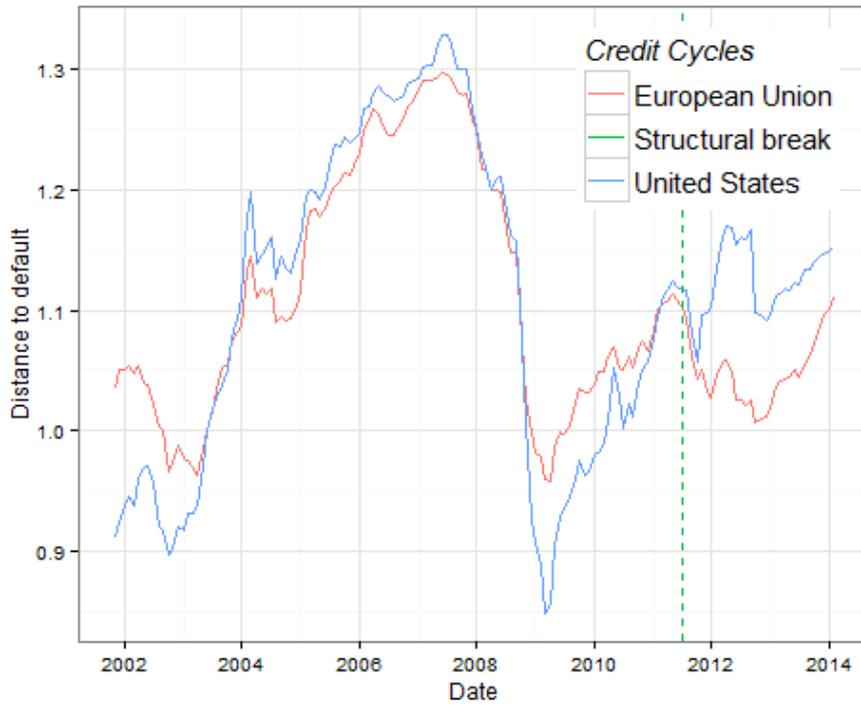
Figure 1: Change in the credit cycle in the United States and the European Union (sources: Europa, Fed)
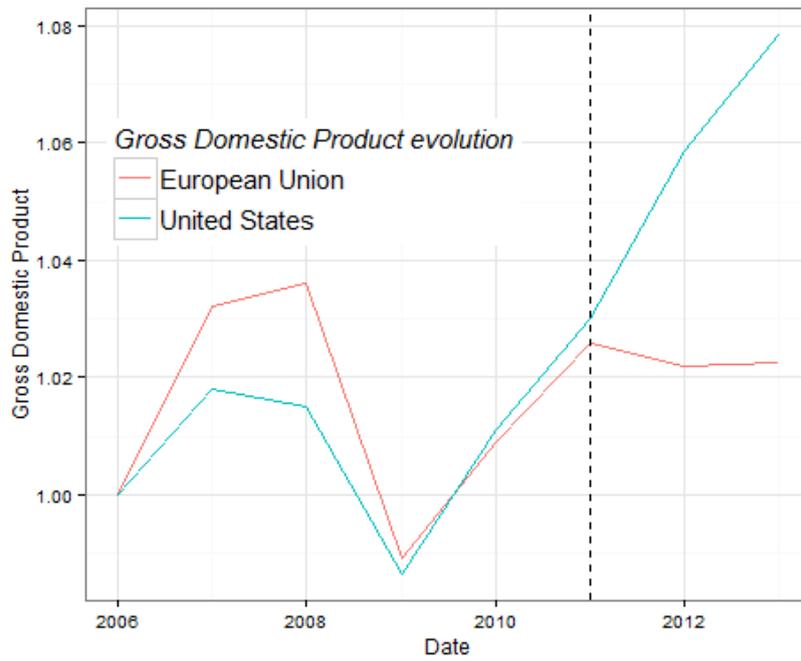
Figure 2: Change in gross national product in the United States and the European Union (sources: Europa, Fed)

Figure 3 shows that, despite a stronger and better recovery, the United States has taken out more debt at a greater speed than the Member States of the EU. Thus, in the United States, additional debt was accompanied by a growth strategy whereas the EU failed to transform the increase in debt into economic growth.
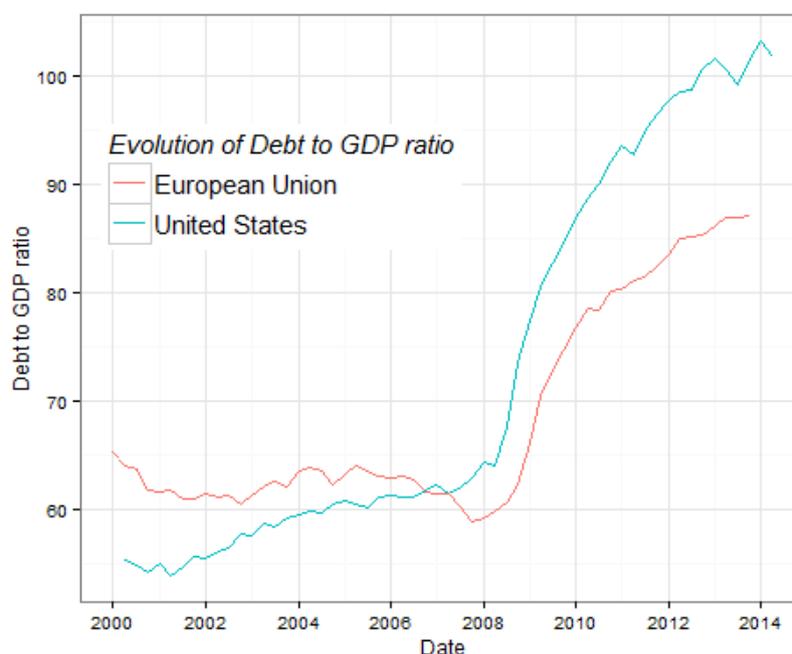
Figure 3: Change in the debt/GDP ratio (sources: Europa, Fed)

II – Objectives

This study aims to deal with the following aspects of the cost of 'non-Europe':

1. To identify the inadequacies and obstacles of the European prudential framework with a view to quantifying, as far as possible, the associated losses.
2. To measure the benefits of improved budgetary coordination with a view to providing flows of credit to the economy and thereby supporting growth and investment.
3. To evaluate the benefits generated by a common deposit guarantee scheme.
4. To estimate the benefits that can be expected from the completion of a genuine banking union with functioning mechanisms (SSM, SRM, ESM, etc.) with a view to avoiding a new financial crisis and breaking the vicious circle between sovereign and bank debt.

These estimates are established on the basis of assumptions proposed for two crisis scenarios:

–   the scenario of a financial crisis following an asymmetric shock in the financial system;

–   a new endemic sovereign debt crisis that spreads across the continent.

III – Methodological framework

3.1   Data sources

To answer these questions effectively and transparently, we use empirical modelling that aims to aggregate macroeconomic, market and financial data. For all 28 members of the European Union, we have over a period of 15 years assembled time series concerning economic characteristics, financial markets and banking sector data. The data sources are described in the table below.

Data type	Source	Output	Frequency
Macroeconomic	Europa, Fed	GDP, debt/GDP ratio, inflation, etc.	Quarterly
Bank balance sheets	Bankscope	Balance sheets, P&L and risk data	Annual
Market data	Bloomberg	CDS, FX, rates, VIX, etc.	Daily
Credit cycle	Rating agencies (S&P, Moody's)	Ratings and credit cycle	Monthly

Table 2: Data sources used for the study

3.2   Cost of 'non-Europe'

3.2.1 Definition

Sc is a set of financial and economic variables with values characterising a systemic event (credit default swap spreads, credit cycle, external ratings, GDP, exchange rates, interest rates, commodity prices, inflation, private debt, etc.). Values are defined on the basis of the joint distribution of these variables depending on certain assumptions (correlation, volatility, economic scenario, recession, etc.).

Under Sc, the cost of 'non-Europe' (CNE) equivalent to European added value is the difference between the systemic costs of the crisis (CC) – under weak European efficiency (WEE) – and the systemic costs under strong European efficiency (SEE).

$$\text{EAV (Sc)= Cost of crisis (WEE)} - \text{Cost of crisis (SEE)} \qquad (1)$$

The estimates of the cost of non-Europe as presented in equation (1) are obtained on the basis of scenarios over an annual horizon and represent non-recurring costs capable of being saved at a time when the sovereign/financial crisis occurs over a one-year horizon.

3.2.2 Crisis scenarios

The assumptions made to simulate a financial crisis are mainly connected with the classic characteristics of a crisis (strong volatility, downtrend and increased correlations between underlyings). Our assumptions also include:

– increase in CDS spreads in the financial sector with an impact on the global economy;
– increase in market volatility;
– increase in the cost of short-term liquidity for banks;
– strong contagion within the banking system;
– focus on the role of investment banks and their portfolios of illiquid instruments as well as on exposure to clearing houses;
– increase in long-term rates;
– flight of deposits from EU banks;
– reduction in economic production within the European Union.

N.B. We consider that, at the time of a financial crisis, countries do not make massive changes in their budgetary policies and that the impact of their sovereign debt ratings is limited.

The assumptions made to simulate a sovereign crisis are:

– sudden deterioration in the sovereign debt rating;
– increase in sovereign CDS spreads;
– failure in fiscal coordination and increase in the debt/GDP ratio;
– serious credit crisis with a sharp reduction in banks' capacity to finance the economy;
– increase in long-term rates;
– massive flight of deposits from EU banks;
– sharp decrease in economic production within the European Union;
– increased costs of bank bailout.

To evaluate the cost of the crisis, we use a simulation method (Monte Carlo approach)[3] that involves generating a large number of scenarios for each factor of the model and the evaluation for each scenario of the economic losses within the European Union. Our method involves generating many scenarios on the main variables (e.g. macroeconomic, market data, etc.). For each scenario, we calculate the impact on the real economy. We will thus obtain a distribution of the economic losses at the end of each scenario. The cost of the crisis is calculated on the basis of the worst cases that occur once a century (once-in-a-hundred-years scenario), i.e. the 99 % quantile of the distribution of losses (see annexes).

3.2.3 European efficiency

As part of the evaluation of the impact of a strong European Union, we make the following assumptions concerning the effects on the economy of the EU during a new crisis:

- Capitalisation of banks in the EU currently appears to be suboptimal, since many of them have low capital adequacy. Since the crisis, the level of capitalisation has improved but extra effort is needed to bring about robust banking union. If a new crisis occurs, improved capitalisation of the banking sector would create less need for a bailout plan and would have fewer harmful consequences for the economy.
- The recent crisis has stressed the cumulative effects of the downtrend in the credit cycle and the increase in the debt/GDP ratio. Moreover, these effects had negative pressure on the economy of the EU. Thus, in a new crisis, budgetary policy is unlikely to amplify the effects of the credit crunch.
- The bank bailouts were implemented in accordance with an amorphous framework, each country having different costs and strategies. If a new crisis generates a bailout need for the various members of the EU, this need should be synchronised and coordinated by a single mechanism at an optimal cost.
- Budgetary discipline and coordination were weak points of the European Union during the crisis. Issuing new debt at a high rate, non-observance of the target of 60 % of the debt/GDP ratio[4] and the lack of efficiency in managing the cost of the new debt aggravated the economic crisis. Improved fiscal coordination and a centralised European budgetary strategy can reduce the impact of the crisis.
- A common deposit guarantee scheme would make it possible to reduce the price of insurance and create a safer environment for savers within the EU. In the event of a new crisis, deposit insurance would make it possible to reduce the flight of deposits, leading to a reduction in negative pressure on the economy.

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[3] Monte Carlo is a mathematical simulation technique that provides a range of results and the probabilities at which they will occur. The method shows extreme losses, like the worst of the cases that can occur once every 10 or 100 years.

[4] Progress towards convergence – Nov. 1995 (report prepared in accordance with article 7 of the EMI statute). European Monetary Institute (EMI). November 1995. Retrieved 22 November 2012.

ENHANCED BUDGETARY COORDINATION

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Main results

– An €85 billion saving, i.e. 0.65 % of GDP, would be achieved through improved budgetary coordination in a sovereign crisis scenario. A loss of €104 billion of total financing credit to the economy would be avoided.

– In the event of a new financial crisis, the cost of 'non-Europe' would be about €58 billion, representing 0.45 % of GDP. The loans offered to the economy would be reduced with less than €65 billion in an efficient union.

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I – Background

Figure 4 shows the debt/GDP ratio for the Member States while stressing the fact that the majority missed the 60 % target. The countries at the geographical periphery of the European Union post higher values of the ratio.
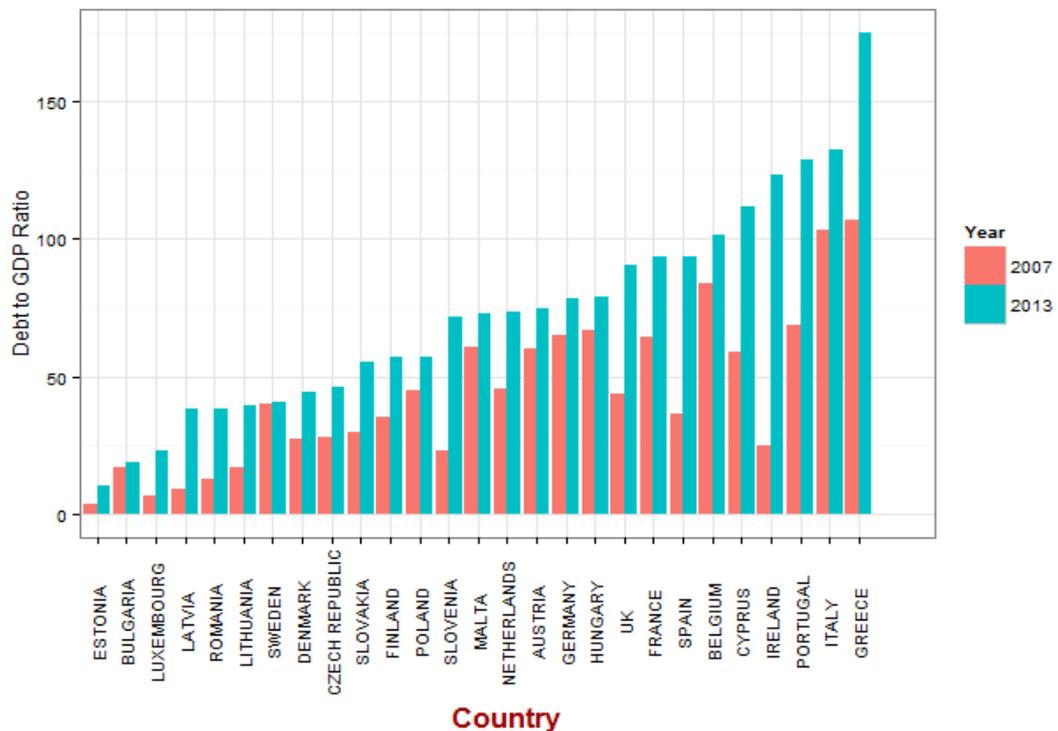

Figure 4: Debt/GDP ratio for EU Member States in 2007 and 2013 (source: Europa)

It is important to stress that the strategy oriented towards an increase in the EU's debt began at the dawn of the crisis, as part of the need to recapitalise the banks and inject funds into the economy.
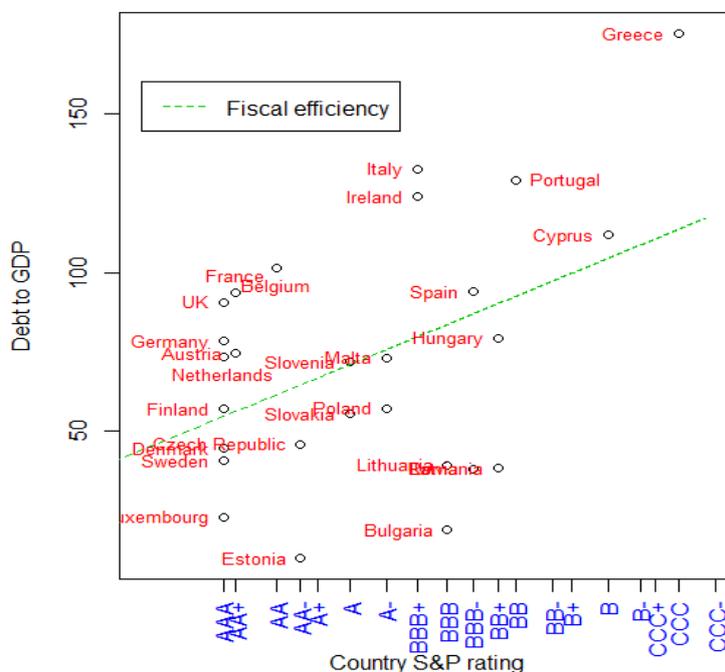
Figure 5: Debt/GDP ratio vs. sovereign debt rating for EU members in 2013. The dotted line ('budgetary efficiency') indicates the level of optimal debt in relation to the country's rating (sources: Europa, Standard & Poor's)

1.1   Methodology

We use a generalised panel linear model that takes account of the link between the level of flows of credit to the economy, GDP growth, the debt/GDP ratio and credit cycles.

The level of credit flows represents the sum of the totals of loans granted by European banks to European counterparties. The data sources are Bankscope and Eurostat. These figures include commercial loans, mortgage loans and consumer credit. It is thus that we manage to explain the change in the level of the flows of credit as a function of the debt/GDP ratio and the level of the credit cycle.

Level of flows of credit = F (**debt/GDP ratio, credit cycle**) (2)

The econometric estimate highlights the following dependencies:

– the increase in the level of the debt/GDP ratio leads to a reduction in the level of flows of credit to the economy, including credit to financial institutions;

– a positive trend in the credit cycle with an improvement in the solvency of enterprises in the European Union brings about an increase in the level of flows of credit to the economy;

– a reduction in the level of flows of credit generates a reduction in economic growth;

– a reduction in the level of flows of credit would put additional pressure on the system of European central banks and its associated mechanisms (i.e. TARGET2).

On the basis of these findings, we construct crisis scenarios under the assumption mentioned in the preceding chapter (paragraph 2.1). We use a simulation technique that involves generating many scenarios on the main variables (credit cycle, debt/GDP ratio).

For each scenario, we calculate the impact on the level of flows of credit to the economy and on GDP. We therefore obtain a distribution of the economic losses at the end of each scenario. The cost of the crisis is calculated on the basis of the worst cases that occur once a century (once-in-a-hundred-years scenario), i.e. a confidence interval of 99 %.

The simulation of economic losses, at the time of a new crisis, is conducted for the following two cases: a strong EU (SEE)[5] and an EU with weak efficiency (WEE).[6] The difference between these two estimates is the cost of 'non-Europe', or European added value (EAV) in the crisis scenarios.

1.2   Results

We simulate 10 000 scenarios aggregating the credit cycle and the debt/GDP ratio with a number of assumptions involving the efficiency of the European framework. Thus, in a strong Europe, we suppose as follows:

– countries succeed in maintaining fiscal coordination;

– there is weak dependency between the credit cycle and an increase in public debt[7] in relation to GDP.

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[5] SEE (Strong Efficient Europe): Assumption of strong and efficient banking and monetary union

[6] WEE (Weak Efficient Europe): Assumption of weak and inefficient banking and monetary union

[7] Private debt is not taken into account.

Our method enables us to stress the impact of the crisis on the financing of the European economy. The table below shows the contractions in terms of flows of credit to the economy by category, under two assumptions: strong and efficient banking and monetary union and weak and inefficient banking and monetary union, respectively

Contraction of flows of credit to the economy by scenario	Sovereign crisis			Financial crisis		
€ billions	SEE	WEE	WEE-SEE	SEE	WEE	WEE-SEE
Total loans	-478.2	-582.6	104.3	-459.2	-524.6	65.4
Commercial loans	-184.1	-224.3	40.2	-176.8	-202.0	25.2
Loans to households	-264.0	-321.6	57.6	-253.5	-289.6	36.1
Consumer credit	-29.6	-36.1	6.5	-28.5	-32.5	4.1

Table 3: Contraction of flows of credit to the economy under different crisis assumptions

The results of the model show that a saving of €85 billion, i.e. 0.65 % of GDP, would be achieved if effective budgetary coordination was respected at the time of a new sovereign crisis. During any financial crisis, EAV is €58 billion, representing 0.45 % of GDP.

Common deposit guarantee scheme

Main findings

- The cost of 'non-Europe' for a sovereign crisis scenario is estimated at €32.5 billion, representing 0.25 % of GDP. The flight of deposits will be reduced by €16 billion.
- In the event of a financial crisis, the cost of 'non-Europe' would be €64 billion, representing 0.49 % of GDP and a flight of deposits reduced by €49 billion.

I. Background

Figure 6 shows the distribution of deposits held by banks in the EU. Germany, the United Kingdom, France, Italy and Spain are the main countries where deposits are concentrated. Table 4 shows the concentration of deposits with the number of banks in each country. It appears that a crisis affecting the top five banks of any country would have an effect on the majority of customers holding their deposits in this country's banking system.
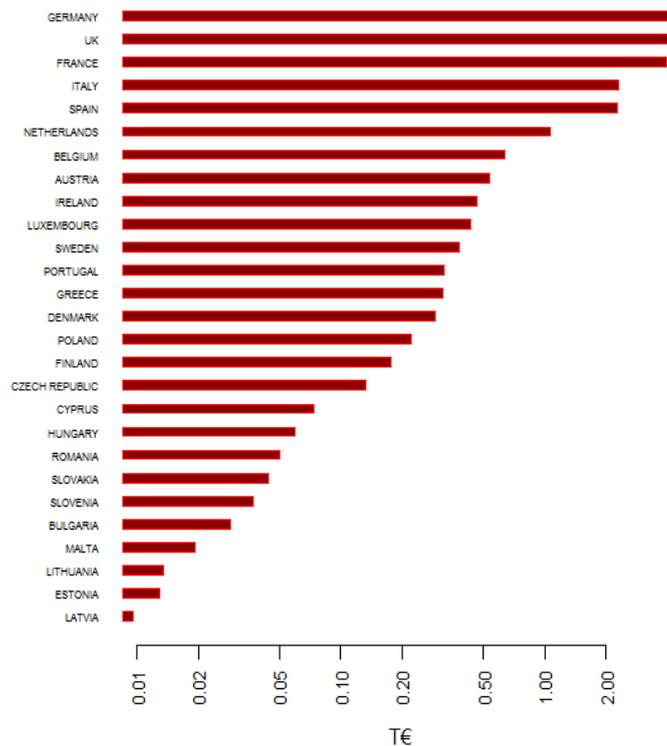
Figure 6: Breakdown by country of total deposits held by European banks (source: Europa)

Country	Total deposits (€ million)	Percentage held by the two largest banks	Percentage held by the five largest banks	Percentage held by the ten largest banks
GERMANY	4 542 837	29 %	50 %	60 %
FRANCE	3 960 179	29 %	53 %	71 %
UNITED KINGDOM	4 002 954	26 %	51 %	78 %
LUXEMBOURG	431 317	21 %	40 %	58 %
ITALY	2 296 689	29 %	45 %	57 %
NETHERLANDS	1 066 622	40 %	86 %	93 %
SPAIN	2 269 793	24 %	50 %	68 %
FINLAND	175 282	67 %	87 %	95 %
IRELAND	465 736	45 %	78 %	94 %
DENMARK	291 184.3	58 %	81 %	88 %
BELGIUM	636 945	54 %	83 %	92 %
SWEDEN	377 925.7	48 %	84 %	90 %
AUSTRIA	532 721	29 %	48 %	59 %
PORTUGAL	321 182	44 %	77 %	97 %
GREECE	317 146	48 %	86 %	99 %
POLAND	221 770.5	37 %	61 %	83 %
CZECH REPUBLIC	132 185.3	39 %	68 %	88 %
HUNGARY	59 596.29	60 %	91 %	98 %
ROMANIA	49 858.19	47 %	79 %	94 %
CYPRUS	73 587	78 %	93 %	99 %
SLOVAKIA	44 149.4	35 %	71 %	96 %
BULGARIA	28 717.44	25 %	53 %	83 %
CROATIA	26 672	43 %	72 %	90 %
SLOVENIA	36 836.58	37 %	61 %	84 %
ESTONIA	12 779	74 %	98 %	100 %
MALTA	19 205.11	71 %	90 %	100 %
LITHUANIA	13 454.88	57 %	92 %	100 %
LATVIA	9 512.68	34 %	67 %	89 %

Table 4: Concentration of deposits in European countries (source: Bankscope)

1.1 Methodology

Our approach is based around two points. First, we develop a model for pricing the deposit guarantee and demonstrate that a common scheme is more effective than a guarantee at the level of each member state. We then analyse the impact of the change in the level of European banks' deposits on the real economy. In the event of a new European crisis, a joint guarantee would limit the flight of deposits from EU banks. Thus a minor contraction in the level of deposits would reduce the draining of flows of credit to the economy and by implication the loss of GDP.

To evaluate the impact of a single guarantee scheme, we develop a pricing model for deposit insurance. We consider here that deposit insurance protects the holder of the deposit in the event of the bank's default or collapse. Therefore, conceptually, the price of the insurance is directly linked to the solvency (probability of default) of the banks and the countries where the banks are based and/or operate.

Following these assumptions, insurance is similar to a financial option that gives its owner the right but not the obligation to claim its deposits at a specified (i.e. nominal or indexed) value within the time stated. Thus the effect of a perfect guarantee is identical to that of a put option, where the amount of the deposits corresponds to the exercise price and where the value of the firm's assets corresponds to the underlying asset (see Annex).

Figure 7 shows the results of the model for the costs of deposit guarantees by country. The northern countries (Sweden, Germany, the United Kingdom, Denmark, the Netherlands) have a much lower cost in relation to the EU average (<1 basis point).[8] Cyprus and Greece have significantly higher costs than the rest (>25 basis points). Prices are different in all the countries and across the countries of the euro zone. The structural differences in prices among the members of the EU could generate a flow of capital from countries perceived as risky towards the safest countries.

The reduction in deposits in the southern countries affects the ability of local banks to finance the economy. The weighted average of the costs of the deposit guarantee on the part of the EU is around 1.5 basis points. The price is very different in each country of the EU and depends chiefly on the CDS spread of the country and the bank.
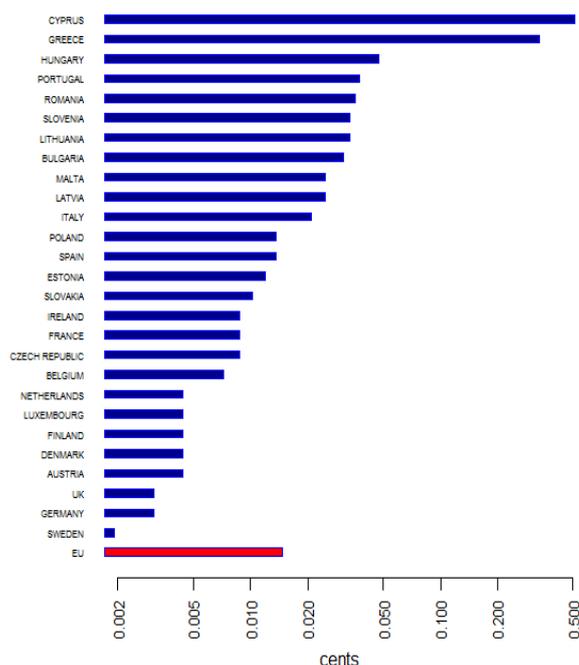
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[8] Basis point = 0.0001.

Figure 7: Actual costs of guarantees of deposits by country

Once the cost of deposit insurance has been calculated, we evaluate the relationship between the level of deposits and the growth of the real economy. We use a generalised panel linear model that explains the link between the level of deposits held by EU banks, GDP growth, the debt/GDP ratio and credit cycles. A dependable deposit insurance scheme would limit contraction of the level of deposits at the time of a decline in the credit cycle. If one or more Member States of the European Union observes a deterioration in its solvency, insurance will make it possible to limit the size of the flows of deposits (flight of deposits) inside and outside the European Union.

The level of deposits represents the sum of the total of the deposits held by European banks. The data sources are Bankscope and Eurostat. Furthermore, we manage to explain the change in the level of the deposits as a function of the debt/GDP ratio and the level of the credit cycle.

Level of deposits = F (**debt/GDP ratio**, credit cycle**)**   (3)

The econometric estimate highlights the following relationships:
- the increase in the level of the debt/GDP ratio leads to a reduction in the level of deposits;
- a positive trend in the credit cycle with an improvement in the solvency of enterprises in the European Union brings about an increase in the level of deposits in European banks;
- a joint deposit guarantee scheme limits the impact of any downtrend in the credit cycle;

- a reduction in the level of deposits directly affecting the banks in their ability to offer credit services ensues from the economy and generates a reduction in economic growth.

In the event of a crisis scenario with a sudden deterioration in the credit quality of one or more countries, it appears that the credit of the countries tends to decline by at least two notches. In the event of weak European efficiency, each country individually insures its own banks' deposits and, in the event of strong European efficiency, a single deposit guarantee scheme operates at EU level. The northern countries (Sweden, Germany, the United Kingdom, Denmark, the Netherlands) see a sudden increase in their guarantee cost while Cyprus and Greece remain at the same level.

In a sovereign crisis scenario, the weighted average cost of the guarantee deposit on the part of the EU is about 2.0 basis points with a joint scheme and about 3.5 basis points with one guarantee scheme per country. For the current amount of deposits, the difference between the two options would be around €3.3 billion.

In a financial crisis scenario, the weighted average costs of the single guarantee deposit scheme would be about 2.5 basis points. In the event of a deposit guarantee scheme at the level of each country, the cost would be about 3.0 basis points. For the current amount of deposits, the difference between the two options would be around €1.1 billion.
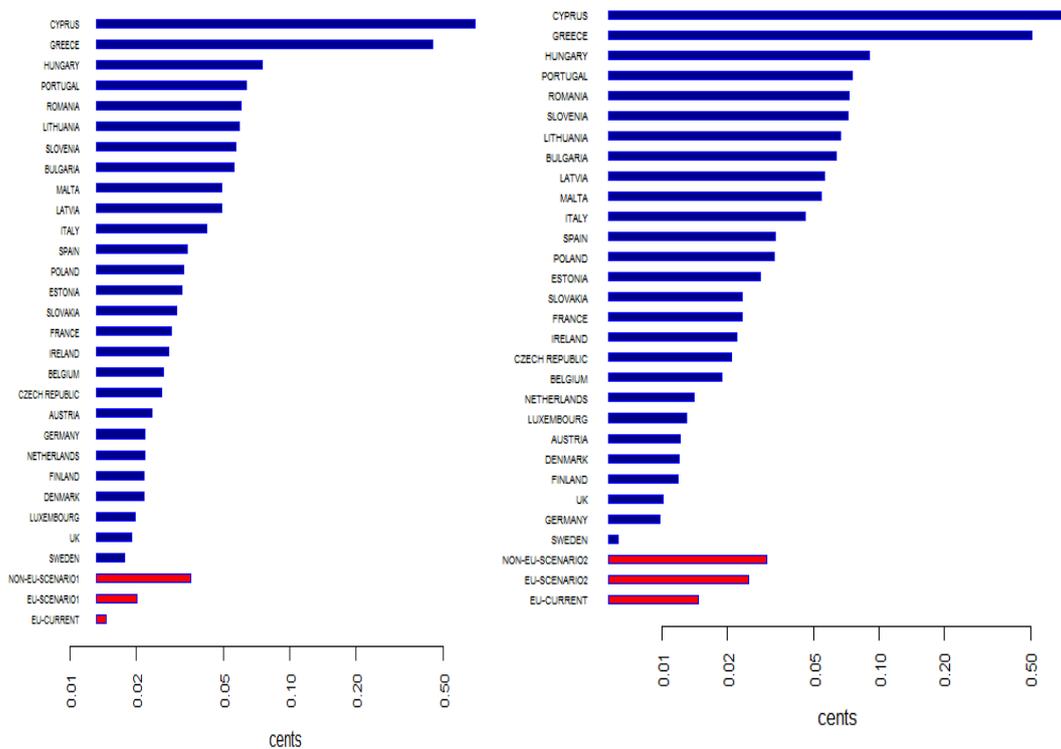

Figure 8: Current cost of deposit guarantees per country depending on the scenarios of a sovereign crisis and a financial crisis

These results highlight the potential challenges for putting in place a joint guarantee. Nowadays guaranteeing deposits of less than €100 000 is not dependable at the level of all Member States. The fund for the deposit guarantee scheme will have to come from the banking systems of the Member States.

1.2   Results

The cost of 'non-Europe' for a sovereign crisis scenario is estimated at €32.5 billion, i.e. 0.25% of GDP. The effect of the flight of deposits from European banks will be reduced by €16 billion through a common deposit guarantee scheme.

In the event of a financial crisis, the cost of 'non-Europe' would be about €64 billion, representing 0.49% of GDP. The effect of the flight of deposits from European banks will be reduced by €49 billion.

Note that the cost of non-Europe under a sovereign crisis scenario is less than the cost of non-Europe for a financial crisis scenario. Our assumptions concerning the sovereign crisis imply that one or more European countries see their sovereign ratings downgraded. Under a once-in-a-hundred-years scenario, even countries with a AAA rating (e.g. the Netherlands or Germany) can suffer this effect. Thus the joint guarantee offers a limited saving in terms of cost of the crisis since the shock affects the entire Union and the effect of pooling is less pronounced.

Under a financial crisis scenario, we consider that one or more banks suffer massive losses but the impact on the country's rating is limited. Thus, under these conditions, the joint guarantee offers a clearer benefit since the deposits kept in weakened banks are insured at the level of the EU, which is impacted at the level of sovereign ratings to a lesser extent than during a sovereign crisis.

REDUCING THE EFFECTS OF A NEW CRISIS

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Main conclusions

- In the event of a new sovereign crisis, the cost of 'non-Europe' would be about €222.3 billion, representing 1.71% of current GDP. The saving in the event of a bailout is about €823 billion.
- Under the assumptions of a financial crisis, the savings generated by a genuine union are estimated at €195 billion, representing 1.5% of current GDP. The savings in terms of bailout need are estimated at €436 billion.

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I. Capitalisation of EU banks

One of this study's findings is that the current banking system is massively undercapitalised,[9] mainly in the countries that have low credit ratings. This fact is also emphasised by the latest stress tests conducted by the European Central Bank (ECB), which failed 25 of them, including nine Italian, three Greek and three Cypriot banks. Using bank balance sheet data, we calculate the amount of risk-weighted assets (RWA) and the capital adequacy by country. We define the capital adequacy ratio as follows:

Capital adequacy ratio = capital/total risk-weighted assets

Figure 9 shows the adequacy between capital and the Standard & Poor's rating by country. The banks of countries that have been bailed out are badly capitalised. Capitalisation has improved since the crisis began but extra efforts are still needed for it to be effective.

Figure 10 shows the result of the deterioration of ratings and of capital adequacy following a sovereign crisis. To simulate the crisis, we suppose that a sudden deterioration in banks' credit quality occurs with a sudden increase in CDS spreads and a heavy spreading of losses. Market volatility also increases, leading to a rise in equivalent RWA. We make the distinction between a sovereign crisis and a financial crisis:

- in a financial crisis, banks have riskier assets and higher probabilities of default; nevertheless, sovereign debt ratings are not significantly affected, and the Union is capable of continuing to recapitalise at an appropriate cost.

- In a sovereign crisis, not only financial institutions are affected by the market but also sovereign debts with increasing CDS spreads, and countries observe a deterioration in their ratings, leading to a high bailout cost and higher losses at GDP level.

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[9] The ECB's stress tests, conducted from a prudential perspective, indicate an undercapitalisation for just 25 banks. Nevertheless, the scenarios proposed in this study based on the once-in-a-hundred-years event go beyond prudential capitalisation and pose the problem from the perspective of economic capital.
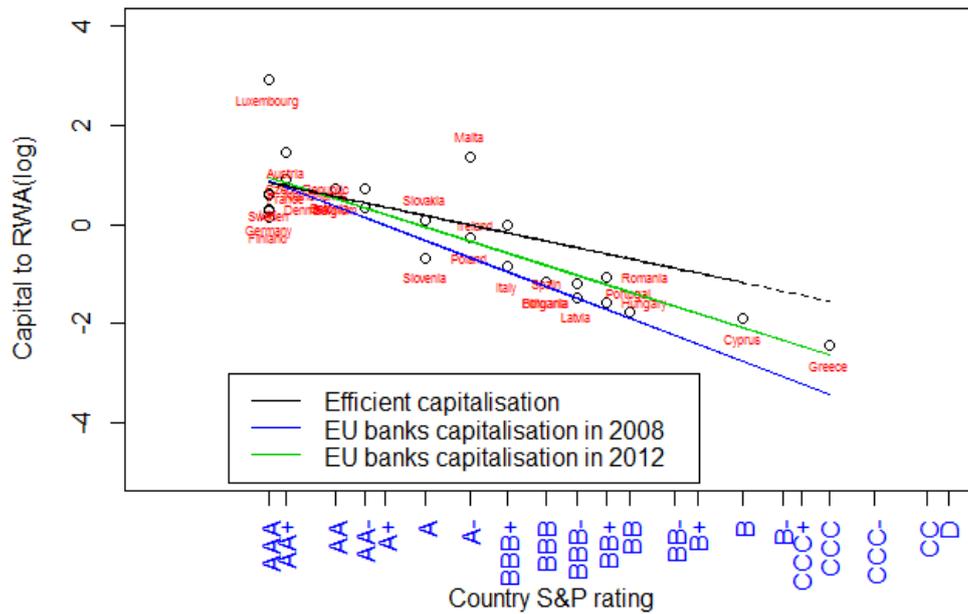
Figure 9: Capitalisation of banks: capital adequacy (capital/estimated RWA) vs. the country's rating. The dotted line of efficient capitalisation indicates the target level of capital for a bank in a country with a given rating (sources: Europa, Bankscope, S&P).
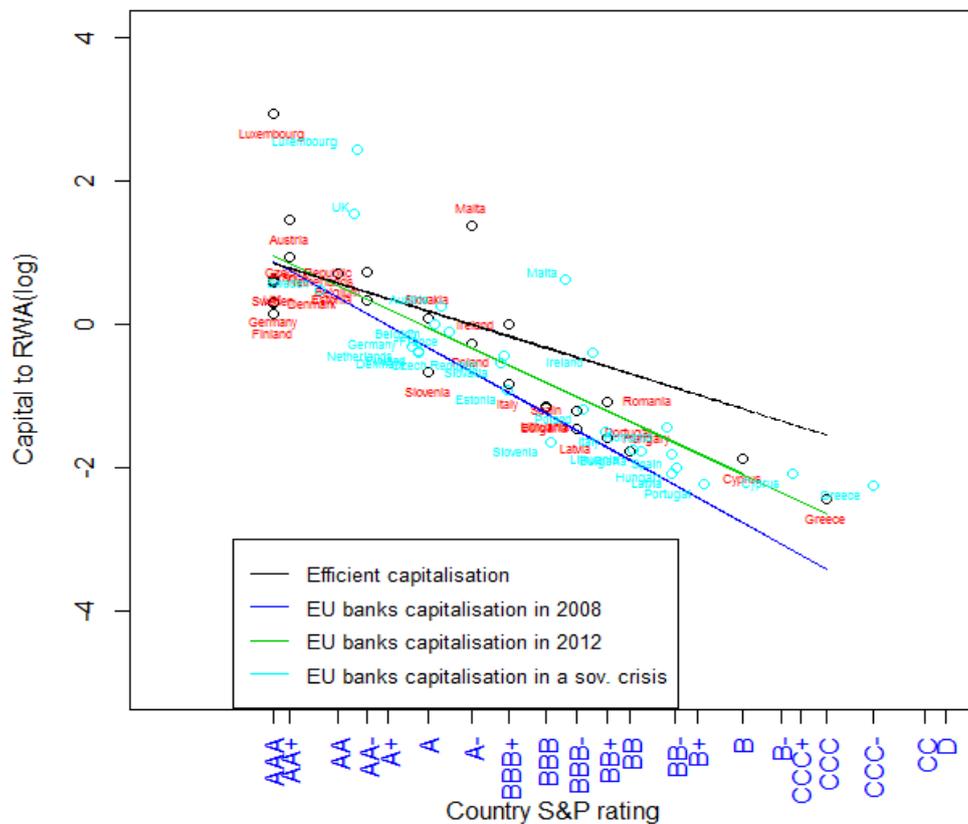

Figure 10: Bank capitalisation: capital adequacy (capital/estimated RWA) during a sovereign crisis

II. Bailout

Our assumptions in relation to a dependable banking union include stricter prudential requirements for banks and rules for managing failed banks and establish a single European rulebook for all the financial players of the 28 Member States of the European Union.

Thus we consider that, for the countries of the euro zone, which are therefore ever more interdependent, more advanced integration of their banking systems is necessary. The assumption made in relation to banking union implies the putting in place of a single supervisory mechanism (SSM) and a single resolution mechanism (SRM) for banks. Banking union is applied to the countries of the euro zone as well as to the countries outside this zone.

In our scenarios, we consider that in a new sovereign crisis, the European banking sector would require substantial recapitalisation. During the preceding euro zone crisis, the cost of borrowing varied. Single resolution would make it possible to considerably reduce the cost of issuing new sovereign debt and of recapitalising banks.

Capital adequacy ratio = F (capital, assets, country's rating, CDS spreads, market conditions)

At the time of a bailout during a crisis, two scissor-effect mechanisms are possible, both involving negative pressure on GDP:

– banks are recapitalised by issuing new sovereign debt with an increase in the debt/GDP ratio and negative pressure on economic growth;

– to reduce capital needs, banks can sell part of their assets and thereby reduce the flows of credit available to the economy with negative pressure on the real economy.

III. Results

In the event of a new sovereign crisis, the cost of 'non-Europe' would be about €222.3 billion, representing 1.71 % of current GDP. The saving in the event of a bailout is about €823 billion.

Under the assumptions of a financial crisis, the savings generated by a strong union are estimated at €195 billion, representing 1.5% of current GDP. The savings in terms of recapitalisation are estimated at €436 billion. EAV breaks down into two parts:

– reduction in economic losses thanks to a robust banking union;

– reduction in the cost of new debt issued following a common bailout strategy.

The EAV breakdown is presented in the table below.

EAV resulting from a strong banking union	Sovereign crisis	Financial crisis
Economic losses	211.3	185
Cost of new public debt	11	10
Total	**222.3**	**195**

Table 5: Cost of non-Europe resulting from a strong banking union

REMAINING INADEQUACIES AND OBSTACLES

We have also identified a number of ways to improve the prudential framework of the EU that could strengthen its effectiveness and better prepare the economy to cope with a crisis in the future.

Capital flows in the EU

Optimisation of capital flows within the European Union on debt and equity instruments is needed to create a more efficient economy. Entry into force of the new financial transaction tax should be accompanied by a study of its impact on capital flows.

Rating agencies

The last euro zone crisis showed strong subjectivity on the part of the rating agencies to debt issued by EU countries accentuating the effect of the crisis. It is perhaps necessary to increase the transparency of the methods by which rating agencies define ratings. Regulation of rating agencies could reduce the effects of a new sovereign crisis. Portfolios of sovereign debt held by European banks play a major role in market equilibrium.

Portfolios of derivative products and their clearing

The role of portfolios of derivative products as a contagion factor was stressed during the crisis. The creation of pooled clearing houses partially resolves this question but also generates new points of concentration of market risks and increases the spread of extreme losses between institutions. Strong guidance of these entities is necessary with a European validation organisation for products that can be cleared, particularly liquid products (swaps inflation).

CONCLUSIONS

The recent crisis reflects the wide variety of diverse economies and the different financial systems within the European Union. Thus the financial crisis generated not only an economic crisis but also a crisis of confidence in relation to the European states and the reliability of the European Union.

We develop an empirical analysis using an econometric model that takes into account, from a behavioural perspective, the relationship between the characteristics of the financial markets, the macroeconomic indicators and the accounting data of the financial institutions in the 28 Member States of the European Union.

The study shows the major role that effective and optimal integration of economic and monetary union could play in limiting the losses generated during a new economic and financial crisis. From the perspective of a new sovereign crisis, improved budgetary coordination between the countries of the EU should generate savings of €85 billion, representing 0.65% of the European Union's GDP. Fully functioning banking union will make it possible to save €222.3 billion, resulting in strengthened capitalisation of financial institutions within the EU.

To achieve stronger synergy of the European economy, a number of themes need to be fleshed out: optimisation of capital flows within the EU, the role of rating agencies, portfolios of derivatives, the pooling of clearing, and bailout mechanisms.

Banking union, in instituting SSM and SRM, ensures the credibility of bailing out any bank in difficulty by discharging the Member States from this responsibility. This should help reduce divergences between countries. However, the inadequacy, in terms of capacity and fire power, of the funds – banks and deposits – represents the main challenge of banking union and the main weak point. This challenge could in fact result in the credibility of this process being called into question.

ANNEXES

I. Definition of the cost of 'non-Europe'

The objective of the study is not to measure long-term European added value (EAV) but to do so in accordance with crisis scenarios. It is therefore necessary to define an appropriate metric of EAV for the worst scenarios that occur at a given confidence interval and at a given horizon. We here define European added value at risk (EAVAR) as the difference between the largest absolute values of the cost of the crisis measured in a confidence interval α under the assumptions of a weak efficient Europe (WEE) and a strong efficient Europe (SEE) respectively.

Sc is a set of financial and economic variables with values characterising a systemic event (credit default swap spreads, credit cycle, external ratings, GDP, exchange rates, interest rates, commodity prices, inflation, private debt, etc.).

Under Sc, the cost of 'non-Europe' (CNE) equivalent to European added value is the difference between the systemic costs of the crisis (CC) – under weak European efficiency (WEE) – and the systemic costs under strong European efficiency (SEE).

$$\text{EAVAR } (Sc) = CC \ (Sc \mid WEE) - CC \ (\ Sc \mid SEE)$$
$$= \text{Inf } \{C \ \epsilon \ R, P(C>c) < 1- \alpha \ \mid WEE)$$
$$- \text{Inf } \{C \ \epsilon \ R, P(C>c) < 1- \alpha \ \mid SEE)$$

We consider 'C' the possible costs (losses) of the European economy. Under a given confidence interval α, the cost of the crisis (CC) is defined as the smallest real value 'c' such that the probability that 'C' is greater than 'c' is (1−α).

In our calculations, we consider risk at a horizon of one year and a confidence level of 99%.

II. Budgetary coordination and flows of credit to the economy

We use a generalised panel linear model that makes the link between the level of flows of credit to the economy, GDP growth, the debt/GDP ratio and credit cycles.

$$y_{i,t} = \alpha_i + \sum_{k \in (0,l)} \beta_{i,k} \cdot x_{i,t-k} + \sum_{k' \in (1,l)} \gamma_{i,k'} \cdot y_{i,t,k'} + \sum_{k \in (0,l)} \lambda_{i,k} \cdot z_{i,t-k} + \varepsilon$$

where $y_{i,t}$ is the change in the total level of credit flows (log) for country i at time t; $x_{i,t}$ is the change in debt/GDP; $z_{i,t}$ is the change in the credit cycle for country i and time t.

Coefficient	Estimate	Standard error	t	P value
β (debt/GDP)	0.556	0.050	11.024	0.000
λ (credit cycle)	0.090	0.029	3.046	0.003
γ (log of first debit and credit)	0.005	0.001	-4.487	0.000
Adjusted R2	49.1 %			

III. Pricing of deposit insurance

A perfect deposit guarantee is identical to a put option, where the amount of the deposits corresponds to the exercise price and where the value of the firm's assets corresponds to the underlying asset (Merton, 1977; Verma, 1985; World Bank, 2002).

$$g = \frac{p}{D} = N(\sigma\sqrt{T} - d) - \frac{V}{D}N(-d)$$

$$where \quad d = \frac{\ln(\frac{V}{D}) + 0.5\sigma^2 T}{\sigma\sqrt{T}}$$

In the preceding equation, *p* is the price of a put option of maturity T with an exercise price D and an underlying value V characterised by a volatility σ. Thus the price *g* of insuring a deposit unit D in a bank with assets V is directly linked to the bank's probability of default (PD):

$$PD = 1 - N(d)$$

We here consider N(x) as the function of the cumulative density of the Gaussian distribution.

IV. Impact of the level of bank deposits on the real economy

We evaluate the relationship between the level of deposits kept in EU banks, the credit cycle and budgetary policy. We use a generalised panel linear model that explains the link between the level of deposits, GDP growth, the debt/GDP ratio and credit cycles.

$$D_{i,t} = \alpha_i + \sum_{k \in (0,l)} \beta_{i,k} \cdot x_{i,t-k} + \sum_{k' \in (1,l)} \gamma_{i,k'} \cdot D_{i,t,k'} + \sum_{k \in (0,l)} \lambda_{i,k} \cdot z_{i,t-k} + \varepsilon$$

where $D_{i,t}$ is the change in the total level of banks' deposits (log) for country i at time t; $x_{i,t}$ is the change in debt/GDP; $z_{i,t}$ is the change in the credit cycle for country i and time t. The results of the estimation are shown in the table below.

Coefficient	Estimate	Standard error	Value of t	Value of p
β (debt/GDP)	0.366868	0.054869	6.6863	0.000
λ (credit cycle)	0.049471	0.020188	2.4505	0.015
γ (log of first change in deposits)	-0.00449	0.000794	-5.6556	0.000
Adjusted R2	34.9 %			

V. Capitalisation of banks

We analyse the relationship between the capital adequacy ratio (CAR) and the country's probability of default using the following equation:

$$l \quad o \quad g_i) = \alpha + \beta \cdot l \quad oA \quad_i g + R$$

The results are shown in the table below.

Coefficient	Estimate	Standard error	Value of t	Value of p
α	-3.40453	0.42288	-8.051	0.000
β	-0.46244	0.05756	-8.033	0.000
Adjusted R2	70.9%			

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The purpose of this study is to evaluate the robustness of a strong economic and monetary union faced with a new crisis scenario. Based on the results of an empirical statistical model devised to analyse the distinctive features of financial markets, macroeconomic indicators and the accounting data of financial institutions in the 28 countries of the European Union, this study suggests that, with a new sovereign debt crisis on the horizon, better European budgetary cooperation could generate savings of some EUR 85 billion, i.e. 0.65% of the EU's GDP, and a functioning banking union would make it possible to save EUR 222.3 billion, mainly generated by a reduced need to recapitalise the EU's financial institutions.