The rise of the sovereign debt crisis: the particular case of Eurozone

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Abstract

During the last years the world has focused on fighting the global economic crisis and this has had implications for the public finances. Especially in the Eurozone, a monetary union without a fiscal one, there have been many developments since the first problems of Greece in 2010.

Two years after, all the Eurozone countries have been put in the spotlight with global investors doubting the economic power of the european sovereigns to fix their finances and the private sector as well. In this economic reality where trust is what keeps the markets functioning, sovereign debt has lost some of the charm, bringing to life a massive sovereign debt crisis.

This paper tries to analyze what happened in eurozone on the way to 2012 and how did the sovereign risk spread. With the sovereign debt crisis being the main theme for the new year, it discusses the impact on the eurozone countries and the survival of the euro as well.

Keywords: sovereign debt crisis, convergence, fiscal compact, budget deficit, imbalances.

Just as the world thought the global crisis was left behind and the impacted economies were slowly creeping into positive territory, new alarm bells started ringing for Europe. Bad news hit the markets in early 2010, greek public finances were suffering the consequences of unreasonably high goverment spending. Suffering a recession since 2008, after all the turmoil it brought in the financial markets and many european leaders meetings, Greece received a 110 billion euro rescue package from European Union and IMF. The bailout was supposed to avoid a greek default, help the greek government get the house in order and above all restore market confidence in a united and strong eurounion. That was May 2010, when people everywhere knew that there was a greek debt crisis. What else happened since then? And what makes this a special debt crisis, when history has shown that it does happen rather frequently for world governments to spend more than they can afford.

1 The rise of sovereign debt crisis

Eurozone is a monetary union of 17 countries under the same central bank but it is not a fiscal union, pooling together economies of large divergences. The Maastricht Treaty made preliminary provisions for the convergence stating that to enter the economic and monetary union (EMU), among other criteria, government deficit should not exceede 3% of GDP and gross government debt should not be more than 60% of GDP (Afxentiou 2000). As of march 2012, considering the more active sovereign debt issuers, only Finland fullfills these criteria (Bloomberg). The issue with the treaties is that none of them includes provisions for the exit of one of the countries, meaning the EU wasn't even thinking it could get trapped into this kind of situation. Each of them has a unique economic profile but all were joined in one of the most severe debt crisis. This section goes through the main developments in eurozone countries[1], analyzing the roots of the problems for each of them.

Greece was the typical case that suffered after a long period of rising government spending and public sector wages. After the first bailout, it was given another 109 bln euro in July 2011, which was later (october) enhanced to 130 bln euro. New austerity measures came along and private holders of greek debt had to agree to a restructuring of greek debt and a "haircut", otherwise there would be a default. Since then, amidst Trojka reviews, political rumours in the greek parlament, revolts of greek people and rich rethoric from the international arena, Greece worries have been present. Being in a recession for five consecutive years[2], with a high unemployment rate and severe austerity measures, the success of the bailouts is still to be seen and largely doubted. At least, Greece has avoided uncontrolled default, for the time being.

The next country to need a 85 bln euro bailout was **Ireland** in september 2010. Once hailed as the Celtic Tiger, because of the rapid economic growth until 2007, it

1 Focusing on the major ones that are active issuers of debt. This leaves out; Malta, Cyprus, Estonia, Luxembourg, Slovakia.

2 4 up to now, same expected for 2012.

suffered a housing bubble that crashed, pulling along the banks that financed it. Being shut out of the international markets, refinancing got very difficult for the banks so Ireland had to guarantee the six biggest banks. After three years of guarantees, reaching 32% (BBC 2010) of the GDP, the bailout became necessary. The good news is that Ireland is now on track with the bailout programme and plans are to return in the market later this year

Portugal was given 78 bln eur in may 2011. This will allow it to stay off the markets for a couple of years and in the mean time implement economic measures to support long term growth. Overspending, rising budget deficit and too many public servants brought Portugal on its knees. There hasn't been any bubble and crash in Portugal, only the gradual loss of competitiveness because of rising labor costs. When the crisis stuck, Portugal found itself loaded in debt that got difficult to refinance in a market that was betting on Portugal needing a bailout. Still now, many believe that Portugal's debt is not sustainable in the current environment and it will need a second bailout. The problem with beliefs, even irrational ones is that as soon as rumours get stronger, the markets itself can bring Portugal down again, leaving no other option than ask for a second bailout.

The other countries to enter alertzone were Italy and Spain, whose 10 year bonds reached the critical 7% yield, considered the level that makes the debt burden unsustainable because around this level, the other countries had to ask for a bailout.

Spain had a real estate bubble which then exposed the weakness of the spanish banking system, inlcluding some of the cajas[3] that had to be bailed out as well. Besides this, Spain also has very weak fundamentals, most famously heavy unemployment. It has the highest jobless rate in the euro area (near 23%). As of january 2012, 1 out of 2 young people are unemployed in Spain.[4]

Italy's public debt is too big (120.1 % of GDP, Bloomberg feb 2012), second only to Greece in eurozone. While the deficit is somewhat smaller than some other countries, Italy really is the big elephant in the room because it would be very hard, or even impossible, to bail out Italy. Same as other southern countries, wage levels rose quickly undermining its competitiveness which along with slow growth and ageing population have taken government debt to levels that economy cannot support. The difference is that italians didn't go through a property bubble-crash, like the spaniards or irish, and the debt of Italy as a country- not just government debt- is actually smaller than for other countries like France or UK[5]. Government debt has always been in high levels but the issue is that now Italy is paying high costs to finance debt payment.

Slovenia had to bail out a banking system full of non-performing loans. The small

3 Otherwise known as savings banks, their original aim was to create the habit of thrift amongst the very poor but they have evolved to compete with and rival commercial banks- Wikipedia.

4 Business week <http://www.businessweek.com/news/2012-01-29/spanish-unemployment-rises-to-15-year-high-of-22-9-economy.html>

5 BBC, <http://www.bbc.co.uk/news/business-15429057>.

but very open economy, it's export oriented and being vulnerable to the european issues, slided in a recession. Even in the worst case sceanorio, Slovenia is a small economy which can be bailed out in the blink of an eye, if needed. The problem are bigger, indebted countries which might be too-big-to-bail.

Belgium also had to bail out banks, especially Dexia, first because of the crisis and again in 2011 when it was shut out of financial markets. A historically high debt to GDP ratio, guarantees of the banking sector and months of political instability increased the size of the public debt.

Germany is the largest and strongest economy in Eurozone. It is the benchmark and the so called safe-haven bcs when risk sentiment goes off, all the money flows to Germany, lowering thus yields and cost of debt for the german government. This doesn't happen bcs people believe germans are better workers or more respectful citizens but bcs Germany does have strong fundamentals. The debt to GDP ratio is high at 85.5% (Bloomberg, feb 2012) but Germany has built a strong trade surplus over the years. Being careful, german wages have increased less than EU average the last years, making it even more competitive in international markets.

Netherlands is noted for stable debt metrics, a core country in eurozone and the nearest one to Germany in market trading. According to the latest Index Mundi data, the dutch economy is noted for stable industrial relations, moderate unemployment and a sizable current account surplus. After long years of growth, the economy-highly open and dependent on foreign trade and financial services-was hit hard by the global economic crisis. The dutch banking sector was exposed to the US subprime crisis and the government was forced to nationalize a few banks, avoiding thus a financial collapse.

Finland has low levels of debt and small public deficit, one the the rarest countries that actually complies with the treaty rules but as S&P (2011) evaluated it's not an isolated economy and its banks rely on outside funding which can get nasty if the crisis is prolonged. Besides this, one of the most serios issues is an aging population. Some of the other EU countries have this problem as well but Finland is getting hit earlier and harder (Laine& Maivali, 2010), facing multiple issues on the labour market, economic growth potential and public finances.

Austria has exposure to central and eastern europe banks (especially Hungary) but stable debt metrics. It's not rated AAA by S&P anymore. Governor Nowotny dismissed rumours about Austria issues as "*widly exaggerated*"[6] but also added that all the positive feelings assumed that "*Euro-region debt contagion is not likely to produce a crisis in eastern Europe as great as the area suffered in 2008-2009*". Austrian banks have been expanding business to these countries, which in a certain way has shielded it from western woes but has now begun to have an increasing number of nonperforming loans.[7]

6 Bloomberg, <http://www.bloomberg.com/news/2011-11-23/nowotny-dismisses-fears-of-austria-east-europe-exposure-ft-says.html>

7 Stratfor, <http://www.stratfor.com/analysis/austrian-banks-limit-exposure-central-eastern-europe>

France has high debt to GDP and banks exposed to Greece and Italy. The treasured AAA rating was finally downgraded by S&P in january amidst fears that fiscal measures were not sufficient to reach budget deficit targets. With the market pricing a downgrade since summer, the downgrade was already incorporated in the french-german bond spreads before the actual movement.

For all of the above countries, budget deficit and debt levels have increased either because of thoughtless government spending, recession or banking sector support. In some cases even a combination of all these factors. If we try to classify them into groups, we notice:

- countries that had unreasonable government spending (Greece, Portugal)
- countries that experienced a property bubble and later a crush (Ireland, Spain)
- countries that went down mainly because of the banking system (Belgium, Slovenia)
- countries with weak debt metrics and exposed to weaker countries (France, Austria, Italy)
- core countries, considered more stable than the peers (Germany, Netherlands, Finland)

2 What did the sovereign debt crisis bring

As of the latest data, Eurozone unemployment hit record high of 10.7 pct in january, inflation 2.7% pct yoy in february and GPD growth in Q4 2011 is -0.3% qoq, 0.7% yoy. There is a large divergence between debt-sticken Greece and export-driven Germany. This is the economic picture of eurozone as a whole but the problems run much deeper and through many channels, raising important questions for each country and for the eurozone as a union. To summarize the effect of the crisis, it is important to mention the following findings.

2.1 Credit standards have tightened

According to BIS (Avdjiev, Schrimpf, Upper, 2012, pp 15) "*Cross border claims, the aggregate of internationally active banks declined during the second quarter of 2011, mainly as a result of a decrease in lending to developed economies*." The ECB lending survey (jan 2012) also acknowledged the tightening of credit standards in Q4 2011, by the adverse combination of a weakening economic outlook and the euro area sovereign debt crisis, which continued to undermine the banking sector's financial position. The tightening appeared to be widespread across larger euro area countries, with the notable exception of Germany.

2.2 Risk appetite has decreased

Markets have been very volatile between lots of news, rumours, summits and mood swings. If we look at CDS as credit risk proxies, they have exploded the last years. 5 year CDS of Greece are the highest, implying a nearly certain default. The next are Portugal and Ireland but Ireland CDS have started to fall again, accepting the positive effect of the reforms.

There is a gap between Austria and France and the four full AAA countries, that didn't start when they were downgraded but has been there since speculation about their fundamentals begun. Another indicator of the safe haven bid was strong buying of Germany. End of 2011, german securities up to 15 month were trading at negative yields. German and dutch goverments sold treasury bills at negative yields, meaning investors were paying these two goverments to take their money. Sounds absurd buying bills from the treasury at a higher price than the one that treasury will pay back at maturity. History shows it did happen, happens everytime investors don't want to put their money in countries they don't trust.

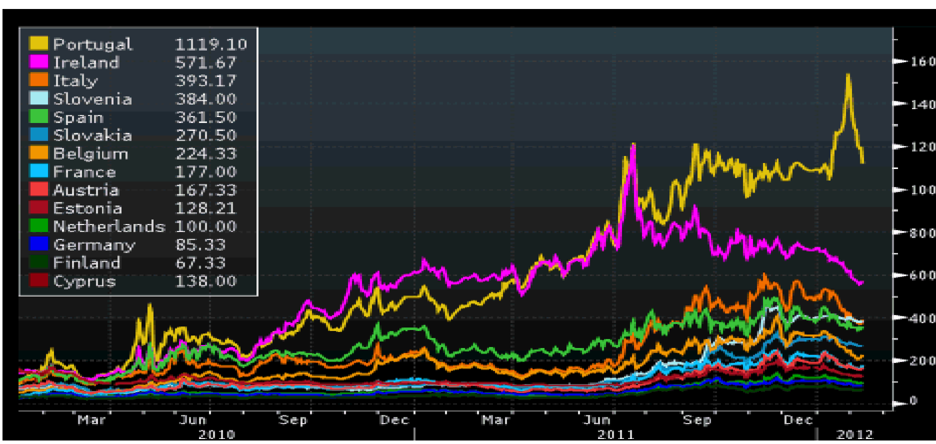

FIGURE 2.1 — *5 yr CDS as of 10 feb 2012 . Source Bloomberg.*

2.3 The rise and "fall" of the credit rating agencies

The role of credit rating agencies has increased gradually, becoming one of the biggest players in the markets. In a financial world where investors rely primarily on ratings, they have become extremely powerful because the credit rating determines access to funding markets and the cost. Kiff, Novak and Schumaher in 2012 found that although upgrades and downgrades in general do not have a significant impact on CDS spreads, upgrades and downgrades in and out of investment grade categories are statistically significant.

Rating agencies have been in the spotlight, often criticized that they are ahead of the curve, making the markets follow their patterns. Suggestions are they should be more careful and include forward looking evaluations about macroeconomic scenarios. Political leaders too have demanded that agencies be better judges and not fuel panic. IMF concluded (Kiff, Nowak and Schumacher, 2012) that their opinion does have an impact in the cost of funding of sovereign issuers, becoming a concern for financial stability. Judging ratings as a lagging indicator of credit risk and sometimes not even a fair one, institutional investors have already started to build in-house models for credit risk evaluation that make them less dependent on rating agencies. The news from this crisis is that change is happening, step by step.

2.4 Banking sector contagion

Some of the europian banks had to be bailed out before but the debt crisis brought additional problems for them. Davies&Ng (2011) summarize the four main channels through which issues in sovereign creditworthiness negatively affect bank funding conditions: direct losses on sovereign holdings, lower collateral values for wholesale and central bank funding, reduced funding benefits from government guarantees and depressed bank credit ratings.

The other issue is that bank-based economies, like nearly all of eurozone countries, recover significantly slower than market-based economies (Allard&Blavy 2011). The research states that this holds even after controlling for other factors such as the nature of the crisis, the policy response, and the degree of economic flexibility. The authors suggest that banking sector repair is very important to avoid slow recoveries, especially due to slow recovery in bank lending. That's also why ECB is providing full liquidity to support the real economy.

IMF research (Vazquez and Federico, 2012) supports Basell III initiatives on structural liquditity and leverage. Evidence from the crisis shows that banks with weaker structural liquidity and higher leverage were more vulnerable to failures. This is of course self understandable but the curious thing is the systematic difference accross bank types. The smaller banks were more vulnerable to failures on liquidity problems while large cross-border banking groups typically failed on insufficient capital buffers. That‘s why Eurozone has placed more attention on bank recapitalization and capital cushions.

2.5 Fiscal imbalances and fundamental divergences

The crisis has exposed the fiscal imbalances between countries and also differences in macroeconomic fundamentals, raising doubts whether a monetary union can survive without converging into a fiscal one. As S&P stated after the downgrade of France&Austria: "*Current crisis stems primarily from fiscal carelessness but the problems go much deeper because they come as consequences of rising external imbalances and divergences in competitiveness between the eurozone's core and the so-called "periphery*".

The differences between the countries are well observable in the trading prices of their securities. If we look at 10 year bond, Germany is the the most expensive while Greece is the cheapest one.

Table 2.1 — *10 year government bond yields, as of 8 march 2012. Source Reuters.*

	Name	Coupon	Mat. Dat	Bid Yield	Ask Yield	Bid Price	Ask price
DE10YT=TWEB	DE 10YT	2,0%	01/04/22	1.804	1.800	101.744	101.780
NL10YT=TWEB	NL 10YT	3.25%	07/15/21	2.138	2.127	109.318	709.411
FI10YT=TWEB	FI 10YT	3.5%	04/15/21	2.232	2.202	110.325	110.585
AT10YT=TWEB	AT 10YT	3.65%	04/20/22	2.819	2.755	107.209	107.791
FR10YT=TWEB	FR 10YT	3.0%	04/25/22	2.880	2.850	101.036	101.297
BE10YT=TWEB	BE 10YT	4.25%	09/28/21	3.377	3.318	107.000	107.791
IT10YT=TWEB	IT 10YT	5.0%	03/01/22	4.745	4.702	102.443	102.780
ES10YT=TWEB	ES 10YT	5.85%	01/31/22	4.979	4.914	106.654	107.180
SI10YT=RR	10Y T-BOND	4.375%	01/18/21	5.042	4.838	95.315	96.715
IE10YT=TWEB	IE 10YT	5.0%	10/18/20	6.992	6.620	87.408	89.595
PT10YT=TWEB	PT 10YT	3.85%	04/15/21	14.039	12.840	49.397	53.325
GR10YT=TWEB	GR 10YT	5.9%	10/22/22	36.559	29.477	19.000	25.000

2.6 Recession is here

Although it is commonly known that crisis have a negative effect on the output, BIS has specifically analyzed the effects of debt crisis on short and medium term. Furceri and Zdzienicka (2011), studied a panel of 154 countries from 1970 to 2008 concluding that debt crises are very detrimental, reducing output growth by about 6-10 percentage points. The paper also presents empirical evidence that exceeding a certain level of public debt affects output growth.

2.7 Hidden balance of payment crisis

Theoretically a current account deficit should be financed by a capital account sufficit, meaning that if a country is spending more than it earns, it has to borrow from abroad to finance the extra spending. In eurozone, peripheral countries are suffering increasing current account deficits, while core countries are having sufficits.

In the Target2 system[8], ECB stands as a clearing house and trade cash-flows between companies, let's say german and greek ones, are transferred between the commercial banks accounts. The respective central banks (Bundebank and Bank of Greece) just register Target 2 balances with the ECB, Buba records receivables while Bank of Greece a liability, no actual settlement occurs. As of 2012, Target2 balances

8 Trans-European Automated Real-time Gross Settlement Transfer System.

have become a source of alarm with Buba claims over 500 bln euro as end of 2011[9]. Netherland, Finland and Luxembourg have positive balances too while other countries, especially PIIGS are running negative balances. That's understandable, the system is saying that there was a capital flight to Germany and other AAA countries bcs they are perceived as safer. As there is no limit for balances in Target2, Greece has an open line of credit with the ECB, which is being automatically financed by a corresponding loan from Buba to the ECB. Previously there were no such problems with Target2 bcs greek liabilities for importing goods/services were being financed with money borrowed from international banks (not with money from bank of Greece) and the balances leveled out.

A BoP crisis has been avoided for the moment as ECB has stepped in and flooded the system in liquidity, but still rising balances at Target2 are an alert that risk is still present. Sinn&Wollmershaeuser (2011) conclude that they indeed measure Eurozone's internal balance-of payments surpluses and deficits. Sinn (2011, pp 4) also finds that through 2008 to 2010, no less than 89% of the aggregate current account deficit of the four GIPS countries and 59% of Germany's current account surplus (capital export) was Target credit. The BoP hidden crisis is the reason that bailout programs have heavily insisted on wage cuts, because increasing competitiveness is the key to tackle fundamental problems like current account deficits.

So far Buba and ECB have treated Target2 balances as statistical items, since they net out in eurozone and don't appear on ECB balance sheet. According to the system rules, Germany's risk doesn't reside in Buba claims, but in the liabilities of the deficit countries bcs each of the countries will bear the losses in proportion to its share in the ECB (Sinn& Wollmershaeuser 2011). If one of the countries defaults, it doesn't really matter who has accumulated claims or liabilities, all the countries will bear that loss, in proportion to the share in the ECB.

3 Response to the crisis and lingering doubts

Probably no one counted how many times did european leaders meet for summits or the days with rumours about a possible greek default. A greek tragedy first and then a powerful debt crisis spreading to the core countries, demanded a strong and multidimensional response, that the following paragraphs attempt to summarize.

3.1 Monetary easing

ECB changed course of monetary policy in mid 2011, went from a hiking cycle to an easing one in a swift way. The base rate is now at 1%, an historical low and unconventional measures were adopted. After a long discussion ECB started buying peripheral debt and relaxed collateral rules to increase access to liquidity. The most

9 FT, <http://ftalphaville.ft.com/blog/2012/03/02/907611/>

important unconventional measure is the liquidity flood. On the verge of a credit cruch, ECB opened the tap offering two LTROs (long term refinancing operations) with a maturity of 3 years. As of end of february ECB, has provided nearly 1.1 trillon euro in open market operations. The primary purpose was to avoid a credit crunch, which has been achieved so far. The second aim is channeling the credit to the real economy, which according to Draghi has begun to happen but it's still to been seen, as it lags in time.

There are not many options left for ECB (which has an inflation priority), too much liquidity in the system contains risks for the future. There is also the risk of a low interest rate trap, meaning that central banks may be forced to keep interest rates low for an extended period of time and keep providing liquidity, out of fear for the financial stability. The risk is that periods of low interest rates make high risk activities more attractive, increasing economic imbalances (Cao and Illing, 2011).

3.2 Austerity measures

Austerity measures most typically include reducing budgets, raising taxes, boosting competitiveness. But the usually quoted measure of a country's ability to repay its debt, debt to GDP, has continued to rise even though these measures have been adopted. That's not because the debt has increased but because the GDP is falling. Bini-Smaghi (2011) mentioned three ways to reduce debt burden;

- Fiscal adjustment
- Inflation
- Restructuring/default

As monetary financing is prohibited and ECB has a mandate to keep inflation under control, the second alternative is not an option. Restructing and default was considered to be systemically dangerous for eurozone and that's why Greece was given two packages and was guided towards a restructuring of the debt. But that cannot be done for other countries, if EU wants the rest of the world to trust it again. That's why the only plausible way is fiscal adjustment. It is costly, needs time and there are doubts if it will pay off but the other option, default/ break down of eurozone is costly as well. No one can quite estimate economic and political costs but it is now clear that political leaders already decided that these costs are too high.

In the middle of a crisis, eurozone has to wrestle between austerity and growth. To quote the perfect comparison from NY Times "*Without growth, reducing debt levels becomes nearly impossible. It is akin to trying to pay down a large credit card balance after taking a pay cut. You can slash expenses, but with lower earnings it is hard to set aside money to pay off debt*".[10]

The main point of the austerity measures is probably wage cutting that would

10 NY Tims, <http://www.nytimes.com/2012/02/15/business/global/portugals-debt-efforts-may-be-a-warning-for-greece.html?_r=1&pagewanted=1&ref=global-home>

promote an increase in competitiveness. It targets the german model, the strongest in eurozone with a careful approach to spending and strong exports, where wage levels have risen less than other countries, keeping it competitive in international markets.

3.3 Banks recapitalization

The sovereign crisis took a big toll on banks. Even countries with stable debt metrics are not fundamentally stable because of their banking sector exposures. Knowing that eurozone countries are mostly bank-based economies, it is easy to understand why stress tests and bank recapitalization plans were given so much importance. Banks were put under stress tests last year aiming to evaluate the resilience of the european banking sector against an adverse but plausible scenario, measuring the sensitivities to a general economic downturn and deterioration in the main variables such as interest rates, economic growth and unemployment (EBA, 2011). As EU president Herman Van Rompuy mentioned:

"*Short term recapitalization is needed in the current exceptional circumstances to create a temporary buffer allowing the banking system to withstand shocks in a reliable manner*."[11]

3.4 Fiscal compact

European leaders agreed on a fiscal compact that was formally signed by 25 countries (Uk and Czech Republic didn't sign) on 01-02 march summit. The aim of the compact is to promote fiscal stability, by addressing the big divergences between the countries and setting fiscal standards that will help prevent another crisis of this kind. Main points of the compact are (European Council 2011):

- Budgets must be in balance or surplus, excluding business cycle variations, it cannot be higher than 0.5% of GDP. If not in balance, automatic correction rules, written into national laws (preferably the constitution), must kick in.
- Countries that have debt to GDP ratio below 60% can have a bigger structural deficit, but not more than 1 % of GDP. Countries with public debt above 60%, have to reduce the excess by one twentieth a year
- National debt issuance plans will be coordinated in advance
- Only countries that have ratified the fiscal compact and written balanced budget rule into national law will be eligible for eurozone bailouts from European Stability Mechanism.

Learning from this crisis, euorozone is now committed to stronger fiscal discipline.

11 Eurotribune, <http://www.eurotribune.eu/index.default.php/?p=21064?

It is still to be seen if it will succeed but in the mean time, this fiscal compact is a sign of the political will to go towards a strong fiscal union and also a committment keep euro alive.

3.5 Concluding remarks

During the last couple of years, between bailouts, summits, unprecedented ECB moves and the fiscal compact, Europe has shown the necessary commitment, to not only safeguard the monetary union but to make it stronger by aiming fiscal convergence. Considering all the work done so far to hold on even to the weakest links, the breakup of eurozone is a largely remote option.

The primary lesson from the sovereign crisis is that fiscal discipline is essential to move forward. The fiscal compact promotes prudent fiscal policies that proved to be essential if the EU wants to avoid a repetition of this crisis. Austerity vs. growth is a big dilemma, raising doubts whether reduction of debt levels can be achieved when in a recession, but in a crisis of these dimensions, long-term improvement has to come first.

To achieve economic convergence, attention should be placed on growth policies and competitiveness boosting measures, especially for peripheral countries the real challenge is tackling fundamental problems, like current account deficits. Labor market reforms and increasing competitiveness are key to recovery because these are the kind of measures that can achieve economic convergence and support eurozone in the long-run.

Bank recapitalization plans are systemically important and will play an important role in the recovery, as most the eurozone economies are bank-based. ECB measures have avoided a credit crunch so far but market market confidence remains volatile. The soundness of the banking sector and its resistance to shocks and contagion is necessary to avoid another type of crisis, that can be even harder than the actual one.

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