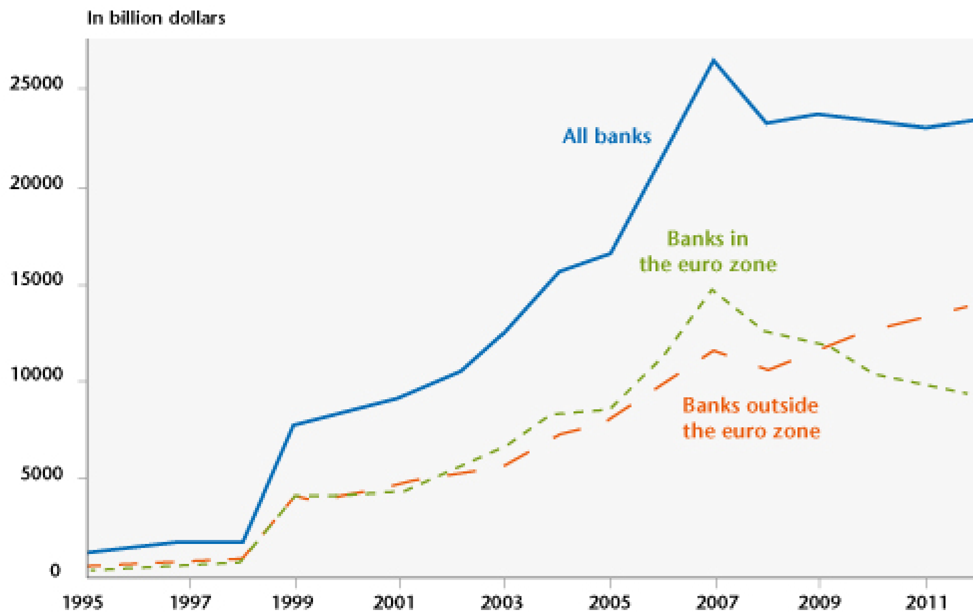
An unprecedented retreat by the euro zone’s banks

By Anne-Laure Delatte, CNRS, OFCE, CEPR, Visiting Lecturer at Princeton University

Another small step was taken last month towards a euro zone banking union when the European Commission presented its proposal for the union’s Single Resolution Fund [1]. While observers generally agree that the 55 billion euros in the Fund are just a drop in the ocean, we show in a recent study that the euro zone’s banks are increasingly isolated from the rest of the world (Bouvatier, Delatte, 2014 [2]). In reality, the fragmentation of the euro zone’s banks that the banking union is supposed to resolve is merely one aspect of the international disintegration of Europe’s banks.

In 2013, cross-border capital flows came to only 40% of their 2007 levels, and the largest decrease in activity was in international bank lending. Figure 1 shows changes in foreign claims by the banks of 14 countries vis-à-vis their partners and breaks the data down by whether the banks are in the euro zone or not.[3]

Figure 1. Consolidated claims with foreign partners, 1995-2012



Source: Authors' calculations (Bouvatier, Delatte, 2014), using IRB data.

The global financial crisis undoubtedly dealt a serious setback to banking activities: in 2008, foreign claims declined significantly, and then remained at this lower level. However, the aggregated situation conceals two conflicting trends. While the international activities of banks outside the euro zone were undoubtedly hit hard in 2007, they quickly began to pick up again thereafter. In contrast, the activity outside the euro zone of the euro zone's banks has continued to fall. In 2012, the euro zone's banks accounted for 40% of international banking activity, compared with 56% in 2007. In short, the raw data suggest:

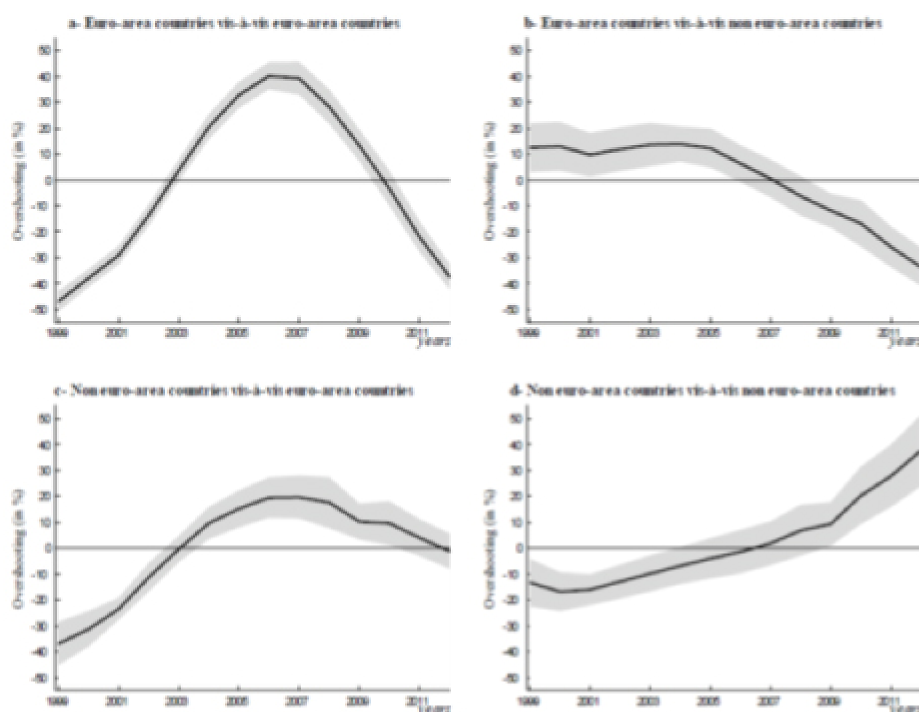
(1) A massive downturn for banks located in the euro zone, and

(2) An interruption that was only temporary for banks located outside the euro zone.

To what extent can these different trends be explained by differences in economic conditions between the euro zone and the rest of the world? The countries of Europe have in fact faced a series of crises since 2008 (the financial crisis, then the sovereign debt crisis), and today the euro zone is

one of the few regions where growth has not resumed. At the same time, the past decade has resulted in a sharp increase in banking integration in the euro zone. So is this just a correction? Also, what differences are there in the way banking integration has taken place in the euro zone and in the rest of the world? To answer these questions, we have developed a unique way to measure international banking integration. Our measure is based on a statistical model of banking that can isolate frictions and variable factors over time [4]. We have extracted temporal trends by geographic region, which enables us to measure at each date where banking activity is at in comparison with the model's predictions. The four charts in Figure 2 show our measurements.

Figure 2. Banking integration. Deviation relative to the predictions of the model (in %)



Source: Bouvatier, Delatte, 2014.

First, it is striking to note that, following the financial crisis of 2008, all the trends in the euro zone were down (Figures 2-a, 2-b and 2-c), in contrast to the situation in the rest of the world (Figure 2-d). Then we see that only banks in the euro zone are going through a process of disintegration (the curve is below the x-axis in Figures 2-a and 2-b). In contrast, the exposure to euro zone debt of banks

located outside the euro zone is at precisely the level predicted by the model (Figure 2-c). In other words, non-European banks are less involved in the euro zone, but this is a correction of the 20% excess existing prior to the crisis, and not a downturn. In contrast, the euro zone's banks have massively reduced their international exposure to inside and outside the euro zone, with a level that is over 30% below the model's predictions. Thus, the banks' massive pull-back is not due solely to the economic slowdown in the euro zone since 2008 (as our estimates take the slowdown into account). More importantly, this decline goes well beyond a correction and indeed constitutes a significant level of disintegration. In other words, the bank fragmentation taking place in the euro zone is merely one part of a larger process of the disintegration of the euro zone's banks.

Finally, Figure 2-d, which traces the situation in the rest of the world, highlights a surprising difference: not only has banking integration not weakened, but, on the contrary, the trend grew stronger after the crisis. In other words, the downturn in banking activity observed in 2008 in the raw data was due entirely to temporary frictions.

Based on these observations, we can draw the following conclusions. First, our estimates suggest that the euro zone's banks have permanently lost market share at the global level. Second, it is striking to note that the banking integration achieved through the monetary union has been totally erased in recent years. In other words, the benefits conferred by the single currency have fallen in number, while the costs are continuing to rise. Finally, our results concerning the mass pull-back of the euro zone's banks vis-à-vis the rest of the world suggest that the banking union, though crucial to supplement the single currency, will not be enough to meet the banking challenges facing the euro zone.

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[1] "Europe bancaire: l'Union fait-elle la force?", Céline Antonin and Vincent Touze, *Note de l'OFCE*, no. 46, 18 November 2014.

[2] Vincent Bouvatier and Anne-Laure Delatte (2014), "International Banking: the Isolation of the Euro Area", *Document de travail OFCE*, forthcoming.

[3] Among the 14 countries reporting, seven belong to the euro zone: Austria, Belgium, Germany, Spain, France, Italy and the Netherlands. The seven other countries are Canada, Switzerland, Denmark, the United Kingdom, Japan, Sweden and the United States.

[4] More specifically, we have used the approach of Portes and Rey (2005), who were the first to estimate gravity equations to study the determinants of financial activity. See Portes, R. and H. Rey (2005), "The determinants of cross-border equity flows", *Journal of International Economics* 65(2), 269-296.

Cyprus: a well-conceived plan, a country in ruins…

By Anne-Laure Delatte and Henri Sterdyniak

The plan that has just been adopted sounds the death knell for the banking haven in Cyprus and implements a new principle for crisis resolution in the euro zone: banks must be saved by the shareholders and creditors without using public money. [1] This principle is fair. Nevertheless, the recession in Cyprus

will be deep, and the new extension of the Troika’s powers further discredits the European project. Once again the latest developments in the crisis are laying bare the deficiencies in euro zone governance. It is necessary to save the euro zone almost every quarter, but every rescue renders the zone’s structure even more fragile.

Cyprus never should have been accepted into the euro zone. But Europe privileged expansion over coherence and depth. Cyprus is a banking, tax and regulatory haven, which taxes companies at the rate of only 10%, while the balance sheet of its oversized banking system is nearly eight times its GDP (18 billion euros). Cyprus is in fact a transit hub for Russian capital: the Cypriot banks have about 20 billion euros in deposits from Russia, along with 12 billion euros in deposits of Russian banks. These funds, sometimes of dubious origin, are often reinvested in Russia: Cyprus is the largest foreign investor in Russia, to the tune of about 13 billion euros per year. Thus, by passing through Cyprus, some Russian capital is laundered and legally secured. As Europe is very committed to the principle of the free movement of capital and the freedom of establishment, it has simply let this go.

Having invested in Greek government debt and granted loans to Greek companies that are unable to pay due to the crisis, the island’s oversized banking system has lost a lot of money and has fostered a housing bubble that burst, resulting in heavy losses. Given the size of the banking system’s balance sheet, these losses represent a significant share of national GDP. The banking system is in trouble, and as a consequence the markets speculated against Cypriot government debt, interest rates rose, the country plunged into a recession, and the deficit deepened. In 2012, growth was negative (-2.5%); the deficit has reached 5.5% of GDP, the public debt has risen to 87% of GDP, the trade deficit stands at 6% of GDP, and the unemployment rate is 14.7%.

The country needed assistance both to finance itself and to

recapitalize its banks. Cyprus requested 17 billion euros, the equivalent of its annual GDP. Ten billion euros of loans were granted, of which nine will be provided by the ESM and one by the IMF. From a financial point of view, the EU certainly did not need that billion, which merely gives the IMF a place at the negotiating table.

In exchange, Cyprus will have to comply with the requirements of the Troika, *i.e.* reductions of 15% in civil servant salaries and 10% in spending on social welfare (pensions, family allowances and unemployment), the introduction of structural reforms, and privatization. It is the fourth country in Europe to be managed by the Troika, which can once again impose its dogmatic recipes.

Cyprus is to lift its tax rate on corporations from 10 to 12.5%, which is low, but Europe could not ask Cyprus to do more than Ireland. Cyprus must increase the tax rate on bank interest from 15 to 30%. This is a timid step in the direction of the necessary tax harmonization.

But what about the banks? The countries of Europe were faced with a difficult choice:

– helping Cyprus to save its banking system amounted to saving Russian capital with European taxpayers’ money, and showed that Europe would cover all the abuses of its Member States, which would have poured more fuel on the fire in Germany, Finland and the Netherlands.

– asking Cyprus to recapitalize its banks itself would push its public debt up to more than 150% of GDP, an unsustainable level.

The first plan, released on 16 March, called for a 6.75% contribution from deposits of less than 100,000 euros and applied a levy of only 9.9% on the share of deposits exceeding this amount. In the mind of the Cypriot government, this arrangement had the advantage of not so heavily compromising

the future of Cyprus as a base of Russian capital. But it called into question the commitment by the EU (the guarantee of deposits under 100,000 euros), which undermined all the banks in the euro zone.

Europe finally reached the right decision: not to make the people alone pay, to respect the guarantee of 100,000 euros, but to make the banks' shareholders pay, along with their creditors and holders of deposits of over 100,000 euros. It is legitimate to include those with large deposits that had been remunerated at high interest rates. It is the model of Iceland, and not Ireland, that has been adopted: in case of banking difficulties, large deposits remunerated at high rates should not be treated as public debt, at the expense of the taxpayers.

Under the second plan, the country's two largest banks, the Bank of Cyprus (BOC) and Laiki, which together account for 80% of the country's bank assets, are being restructured. Laiki, which was hit hardest by developments in Greece and which was more heavily involved in the collection of Russian deposits, has been closed, with deposits of less than 100,000 euros transferred to the BOC, which takes over Laiki's assets, while it also takes charge of the 9 billion euros that the ECB has lent it. Laiki customers lose the portion of their deposits over 100,000 euros (4.2 billion), while holders of Laiki equities and bonds lose everything. At the BOC, the excesses of deposits above 100,000 euros are placed in a bad bank and frozen until the restructuring of the BOC is completed, and a portion of these (up to 40%) will be converted into BOC shares in order to recapitalize the bank. Hence the 10 billion euro loan from the EU will not be used to resolve the banking problem. It will instead allow the government to repay its private creditors and avoid a sovereign bankruptcy. Remember that the national and European taxpayers are not called on to repair the excesses of the world of finance.

This is also a first application of the banking union.

Deposits are indeed guaranteed up to 100,000 euros. As requested by the German government, the banks must be saved by the shareholders and creditors, without public money. The cost of bailing out the banks should be borne by those who have benefited from the system when it was generating benefits.

From our viewpoint, the great advantage is ending the poorly controlled financial status of Cyprus. It is a healthy precedent that will discourage cross-border investment. It is of course regrettable that Europe is not attacking other countries whose banking and financial systems are also oversized (Malta, Luxembourg, the United Kingdom) and other regulatory and tax havens (the Channel Islands, Ireland, the Netherlands), but it is a first step.

This plan is thus well thought-out. But as was modestly acknowledged by the Vice-President of the European Commission, Olli Rehn, the near future will be very difficult for Cyprus and its people. What are the risks?

Risk of a deposit flight and liquidity crisis: unlike the initial plan, which called for a levy on all deposits, the new plan is consistent with reopening the banks relatively quickly. In fact, the banks are staying closed as long as the authorities fear massive withdrawals by depositors, which would automatically lead to a liquidity crisis for the banks concerned. However, as small depositors are not affected and large depositors have their assets frozen until further notice, it seems that the risk of a bank run can be ruled out. A problem will nevertheless arise when the large deposits are unfrozen. Their almost certain withdrawal will very likely result in a loss of liquidity for the BOC, which will need to be compensated by specially provided liquidity lines at the ECB. Some small depositors who take fright could also withdraw their funds. Similarly, holders of large deposits in other banks, although in less difficulty and thus not affected, could worry that the levies will be extended in the future and therefore try to move their money abroad. Cyprus

remains at the mercy of a liquidity crisis. This is why the authorities have announced exceptional controls on capital movements when the banks reopen, so as to prevent a massive flight of deposits abroad. This is a novelty for the EU. But the transition, which means shrinking the Cypriot banking sector from 8 times the island's GDP to 3.5 times, could well prove difficult and may have some contagion effects on the European markets, since the banks will have to sell a significant amount of assets.

Risk of a long recession: the halving of the size of the banking sector will not take place painlessly, as the entire economy will suffer: bank employees, service partners, attorneys, consultants, auditors, etc. Some Cypriot companies, along with some wealthy households, will lose part of their bank holdings.

However, the plan requires simultaneous fiscal austerity measures (on the order of 4.5% of GDP), structural reforms and the privatizations so dear to Europe's institutions. These austerity measures, coming at a time when key economic activity is being sacrificed, will lead to a lengthy recession. The Cypriots all have in mind the example of Greece, where consumption has fallen by more than 30% and GDP by over 25%. This shrinkage will lead to lower tax revenues, a higher debt ratio, etc. Europe will then demand more austerity measures. Seeing another country trapped in this spiral will further discredit the European project.

Some desire to pull out of the euro zone has been simmering since the beginning of the crisis in Cyprus, and there is little chance that it will die out now.

It is therefore necessary to give new opportunities to Cyprus (and to Greece and Portugal and Spain), not the economic and social ruin imposed by the Troika, but an economic revival involving a plan for industrial reconversion and reconstruction. For example, the exploitation of the gas

fields discovered in 2011 on the south of the island could offer a way out of the crisis. It would still be necessary to finance the investment required to exploit them and generate the financial resources the country needs. It is time to mobilize genuine assistance, a new Marshall Plan financed by the countries running a surplus.

Risk of chain reactions in the banking systems of other Member States: the European authorities must make a major effort at communications to explain this plan, and that is not easy. From this point of view, the first plan was a disaster, as it demonstrated that the guarantee of deposits of less than 100,000 euros can be annulled by tax measures. For the second plan, the authorities must simultaneously explain that the plan is consistent with the principle of the banking union – to make the shareholders, creditors and major depositors pay – while clarifying that it has a specific character – to put an end to a bank, fiscal and regulatory haven, and so will not apply to other countries. Let's hope that the shareholders, creditors and major depositors in the banks in the other Member States, particularly Spain, will allow themselves to be convinced. Otherwise significant amounts of capital will flee the euro zone.

Risk of weakening the banking union: the Cypriot banking system was of course poorly managed and controlled. It took unnecessary risks by attracting deposits at high rates that it used to make profitable but risky loans, many of which have failed. But the Cypriot banks are also victims of the default on the Greek debt and of the deep-going recession faced by their neighbours. All of Europe is in danger of falling like dominoes: the recession weakens the banks, which can no longer lend, which accentuates the recession, and so on.

Europe plans to establish a banking union that will impose strict standards for banks with respect to crisis resolution measures. Each bank will have to write a "living will" requiring that any losses be borne by its shareholders,

creditors and major depositors. The handling of the Cyprus crisis is an illustration of this. Also, the banks that need capital, creditors and deposits to comply with the constraints of Basel III will find it harder to attract them and must pay them high rates that incorporate risk premiums.

The banking union will not be a bed of roses. Bank balance sheets will need to be cleaned up before they get a collective guarantee. This will pose a problem in many countries whose banking sector needs to be reduced and restructured, with all the social and economic problems that entails (Spain, Malta, Slovenia, etc.). There will inevitably be conflicts between the ECB and the countries concerned.

Deposit insurance will long remain the responsibility of the individual country. In any event, it will be necessary in the future banking union to distinguish clearly between deposits guaranteed by public money (which must be reimbursed at limited rates and must not be placed on financial markets) and all the rest. This argues for a rapid implementation of the Liikanen report. But will there be an agreement in Europe on the future structure of the banking sector between countries whose banking systems are so very different?

The Cypriot banks lost heavily in Greece. This argues once again for some re-nationalization of banking activities. Banks run great risks when lending on large foreign markets with which they are not familiar. Allowing banks to attract deposits from non-residents by offering high interest rates or tax or regulatory concessions leads to failures. The banking union must choose between the freedom of establishment (any bank can move freely within the EU countries and conduct whatever activities it chooses) and the principle of liability (countries are responsible for their banking systems, whose size must stay in line with that of the country itself).

In the coming years, the necessary restructuring of the European banking system thus risks undermining the ability of

banks to dispense credit at a time when businesses are already reluctant to invest and when countries are being forced to implement drastic austerity plans.

In sum, the principle of making the financial sector pay for its excesses is beginning to take shape in Europe. Unfortunately, the Cyprus crisis shows once again the inconsistencies of European governance: to trigger European solidarity, things had to slide to the very edge, at the risk of going right over the cliff. Furthermore, this solidarity could plunge Cyprus into misery. The lessons of the past three years do not seem to have been fully drawn by Europe's leaders.

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[1] The over 50% reduction of the face value of Greek bonds held by private agents in February 2012 already went in this direction.

The ban on naked CDS takes effect

By Anne-Laure Delatte

The small CDS market serves as an instrument for coordinating speculation against European states. To stop the speculation, the European Union recently adopted a new regulation that came into force on 1 November. Unfortunately, this new law, though pioneering and ambitious, suffers from flaws that render it ineffective. This provides an example of how the interests of a single economic sector can capture policy.

Quick primer on finance: how to speculate against a State

Two methods have won their spurs: short sales in the bond market and naked sales on the CDS market. Let's take two examples. If you think that Spain will not be able to meet its commitment to reduce its deficit in 2013, you could make money by betting against it the next time it issues bonds. To do this, you need to find an investor on the market who is prepared to buy Spanish bonds when they are next issued. You sell your customer bonds at that point while wagering that the price will be lower than what they think. You do not buy the titles at that time, as you can buy them at the time of delivery. You win if your expectations were correct: if the price of Spanish bonds declined due to the deterioration in the country's economic situation, then you will buy them for less than the purchase price that you agreed to. You are engaging in short selling.

There is another way of operating that the new European law also tries to counter. You make your bets on the market for credit default swaps (CDS), that is, the market for insurance against a Spanish default. It is smaller, it is concentrated, and it is easier to affect than the bond market. There's no need for Spain to declare bankruptcy to pocket your winnings! Buy Spanish CDS (on state or Santander bonds) today and sell them when the risk has increased: you resell the protection for more … One detail: do not actually burden yourself with Spanish bonds. They are useless since it is on the resale of the CDS that you make your profit. Your intention was never to insure the bonds… The CDS are tradable goods whose price evolves according to supply and demand. And this is precisely the advantage of a small liquid market: you can move the market with lesser amounts…

The Directive that took effect on 1 November 2012 banned these two strategies: short selling sovereign bonds and naked trading in sovereign CDS. If you now want to bet on the CDS market, you are required to hold in your portfolio the

securities that the CDS protects, or at least very similar ones.

At last, a courageous law! A ban on naked CDS, which was considered in the United States and then abandoned in 2009, is a pioneering act by Europe! It's no longer possible to speculate against Europe's states…

Except that:

The ban does not apply to "market makers". Who are they? To be sure that a market works, certain operators are committed to always buy or sell a security to anyone who so wishes (they simply determine the price of the transaction). This ensures market liquidity. For example, Morgan Stanley is a very active market maker on the entire CDS market; the bank provides continuous prices for all market transactions. "So these market makers are useful. Can you imagine if we even included these operators in the ban on naked CDS? There would be no more liquidity!" This is the essence of the argument used by the major banks to negotiate their exemptions and the specific argument used to justify the exemption of these market makers from the ban on naked sovereign CDS sales in Europe. The market makers won: they can continue to trade CDS without holding the underlying bonds.

But wasn't the point made in the previous post that this market is in fact highly concentrated? That 87.2% of transactions were carried out by the 15 largest banks in the world … all of which are market makers? In other words, the new rule will be applied to everyone … except the main players on the market. It seems that the big French banks are currently in discussion with the European financial markets authority (ESMA) over the exact definition of a market maker to ensure that they too are exempt.

Of course. But the hedge funds too? They aren't market makers, they're clients. So the Directive must apply to them!

Except that:

Only the sovereign CDS market is concerned. It is still possible to hold CDS on a bank issue without holding the title. So it will be easy to circumvent the ban on betting against a State by betting against one of its banks (Santander in the example above). One shudders when contemplating the fragility of Spain's banks…

In conclusion, the idea for such a law was commendable. But the devil is still and always in the detail. The financial sector has defended its interests during the drafting of the law. It is urgent to develop the means to counterbalance this during negotiations. The Finance Watch association has been created specifically with this objective: to be present and make the voice of civil society heard during the preparation of financial reforms. The only problem is, it's David against Goliath…

The crisis and market sentiment

By Anne-Laure Delatte

Fundamental factors alone cannot explain the European crisis. A new OFCE working document shows the impact of market beliefs during this crisis. In this study, we search for where market sentiments are formed and through what channels they are transmitted. What is it that tipped market optimism over into pessimism? Our results indicate that: 1) there is a strong self-fulfilling dynamic in the European crisis: fear of

default is precisely what leads to default, and 2) the small market for credit derivatives, credit default swaps (CDS), insurance instruments that were designed to protect against the risk of a borrower’s default, is the leading catalyst of market sentiment. This result should be of great concern to the politicians in charge of financial regulation, since the CDS market is opaque and concentrated, two characteristics that are conducive to abusive behaviour.

What role do investors play during a crisis? If massive sales of securities reveal the weaknesses of a certain business model, then it would be dangerous to limit them: it would be killing the messenger. But if these massive sales are triggered by a sudden turnaround in market sentiment, by investors’ panic and distrust of a State, then it is useful to understand how market beliefs are formed so as to better control them when the time comes.

To answer this question in the context of today’s European crisis, we have drawn on work on the crisis in the European Monetary System (EMS) in 1992-93, which has many common features with the current situation. At that time investors were skeptical about the credibility of the EMS and put it to the test by speculating against European currencies (*sic*). The pound sterling, the lira, the peseta, etc., were attacked in turn, and governments had to make concessions by devaluing their currency. At first this crisis puzzled economists, as they were unable to explain the link between the speculative attacks and fundamentals: firstly, the countries under attack did not all suffer from the same problems, and secondly, while the economic situation had deteriorated gradually, why had investors decided all of a sudden to attack one currency and not another? Finally, why did these attacks succeed? The answer was that the speculation was not determined solely by the economic situation (the “fundamentals”) but was instead self-fulfilling.

The same may well be the case today. If so, then the crisis in

Spain, for example, would have its roots in the beliefs of investors: in 2011, as Spain had been designated the weakest link in the euro zone, investors sold their Spanish securities and pushed up borrowing rates. Interest payments ate into the government accounts, and the debt soared. Spain's public deficit will be higher in 2012 than in 2011 despite its considerable austerity efforts. The crisis is self-fulfilling in that it validates investors' beliefs *a posteriori*.

How could this be proved? How can we test for the presence of a self-fulfilling dynamic in the European crisis? Our proposal is as follows: market beliefs must be a critical variable if, given the same economic situation, investors nevertheless require different interest rates: when the market is optimistic, the difference in interest rates between Germany and Spain is less than when the market is pessimistic.

Our estimates confirm this hypothesis for a panel consisting of Greece, Ireland, Italy, Spain and Portugal: without any significant change in economic conditions, interest rate spreads rose suddenly following a change in the beliefs of the market.

The next question is to understand where these market beliefs are formed. We tested several hypotheses. Ultimately it is the market for credit default swaps (CDS) that plays the role of the catalyst of market sentiments. CDS are insurance products that were originally designed by banks to ensure against the possibility of a borrower's default. An investor who holds bonds may guard against the non-reimbursement of their security at maturity by buying a CDS: the investor then pays a regular premium to the seller, who agrees to repurchase these bonds if the borrower goes bankrupt. But this insurance instrument quickly became an instrument for speculation: the vast majority of operators who buy CDS are not actually owners of an underlying bond (underlying in financial jargon). In reality, they use CDS to bet on the default of the borrower. It is as if the inhabitants of a street all insured the same

house, but did not live in it, and are hoping that it catches fire.

However, our results indicate that it is precisely in this market that investors' beliefs vis-à-vis the debt of a sovereign country are formed. In an environment marked by uncertainty and incomplete information, the CDS market transmits a signal that leads investors to believe that other investors "know something". Given equivalent economic situations, our estimates indicate that investors require higher interest rates when CDS spreads increase.

To summarize, some European countries are subject to self-fulfilling speculative dynamics. A small insurance market is playing a destabilizing role, because investors believe in the information it provides. This is troubling for two reasons. On the one hand, as we have said, this instrument, the CDS, has become a pure instrument of speculation. On the other hand, it is a market that is unregulated, opaque and concentrated – in other words, all the ingredients for abusive behaviour … 90% of the transactions are conducted between the world's 15 largest banks (JP Morgan, Goldman Sachs, Deutsche Bank, etc.). Furthermore, these transactions are OTC, that is to say, not on an organized market, *i.e.* in conditions where it is difficult to monitor what's going on.

Two avenues of reform were adopted in Europe this year: on the one hand, a prohibition against buying a CDS if you do not own the underlying bond – the law will enter into force in November 2012 throughout the European Union. Second is a requirement to go through an organized market in order to ensure the transparency of transactions. Unfortunately, neither of these reforms is satisfactory. Why? The answer in the next post…