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May 31, 2012

Will this Greek tragedy climax in the death of the Euro?

Greece could well be out of the euro soon, depending on the results of the election scheduled there for June 17th. Such an exit could conceivably occur even before the election if enough people take actions to anticipate a euro exit, unintentionally precipitating the event. An exit would inevitably be messy and has the potential to push Europe into a severe recession, the U.S. into at least a modest recession, and to substantially slow the growth of China. The Institute of International Finance has estimated an exit could cost the world economy over \$1 trillion and official bodies such as the International Monetary Fund (IMF) have similarly warned of disastrous results.

This paper answers the following questions about a potential euro exit:

- What is the probability of an exit from the euro?
- Why might Greece exit?
- What is the argument about austerity and growth?
- What is likely to happen in the Greek elections?
- What will happen after those elections?
- How might a Greek exit develop?
- What would the damage be of a Greek exit?
- Why might other countries exit?
- What can the euro area do to stop further exits?

What is the probability of an exit from the euro?

Part of what makes this so scary is that it is impossible even to accurately estimate the probabilities, much less know the outcome. Analysts at investment banks are estimating probabilities of a euro exit by at least Greece that cluster around 50%¹, the traditionally safest percentage to choose when there is a serious likelihood of something happening, but no real way to assess the probability. (It's hard to be proven wrong either way when you have said something was equally likely to happen or not to happen.) Various economists and political analysts give opinions ranging from an exit being "inevitable" to "very unlikely," strongly influenced by whether they view the euro experiment as fundamentally unsound or simply experiencing growing pains.

An important question is what probability of exit is currently priced into the financial markets, since this will affect how markets react to future events. My own reading is that financial markets are acting as if the probability is real, but well under 50%, despite the comments of financial analysts. Given the

¹ Among others, Willem Buiter's Economics team at Citigroup estimates the probability of a Greek exit at 50-75% and a team of European analysts at Morgan Stanley recently raised their probability estimate to 35%.

potential for massive damage to the world economy from an exit, the levels of stock markets around the world do not seem to have dropped enough to reflect a 50/50 likelihood.

My personal view is that a Greek exit has a probability in the vicinity of perhaps one in four or five, certainly higher than I have estimated in past months but still reflecting my belief that an exit would be harmful for both Greece and Europe as a whole and therefore will be avoided.

Why might Greece exit?

The leading Greek parties all support staying in the euro, as do about three-quarters of the voters. However, an almost equally large majority support parties that favor a rejection of the existing bailout agreement because they believe it has too many “austerity” measures, shorthand for cuts in government spending and reductions in labor market and other protections. The problem is that rejecting the bailout agreement is likely to be incompatible with staying in the euro, forcing a choice between these two strongly held views.

The Greek government spends considerably more than it takes in through taxes and other revenue sources, with much of the difference funded by loans and aid from the rest of Europe and the IMF. Greece secured that assistance by agreeing to impose austerity measures in negotiations with the so-called “troika” of the European Commission, the European Central Bank (ECB), and the IMF. The troika may have some flexibility to alter the bailout agreement, but is insisting on maintaining the core of the austerity measures. If a new Greek government rejects the bailout agreement and subsequent negotiations fail, the troika may withdraw the necessary financial support and the ECB may pull the plug on liquidity assistance that has kept the Greek banking system alive. There are a number of ways in which this dire situation could lead to an exit from the euro, as described further below.

What is the argument about austerity and growth?

The problems in the euro area have demonstrated that many of the members have unacceptably high levels of debt combined with budget deficits that are digging this hole deeper each year. In addition, the troubled countries would benefit greatly by increasing their economic growth rates. Virtually no one would disagree with this assessment; the arguments are about the implications.

Germany and some likeminded nations in Europe, along with the ECB, recommend policy prescriptions that emphasize cutting budget deficits and eliminating laws, regulations, and practices that discourage competition, encourage inefficiency, and hold up prices in labor and other markets. One of the more controversial of these reforms is the proposed elimination of many labor protections that make it extremely difficult to fire permanent contract employees in most of the troubled countries. They also favor eliminating a number of guild restrictions that shield pharmacists, lawyers, and many other professions from competition. The latter reforms are less controversial to the general public, but are fiercely resisted by those groups that are currently protected.

Regardless of their long-term virtues in increasing the potential growth rate of the economy, the austerity measures almost all create short-term pain. Less government spending means some people

lose their jobs or are forced to accept lower pay. Similarly, reductions in labor market rigidities generally lead to layoffs or cuts in compensation when economies are weak.

There are two broad sets of objections to the austerity measures. First, there is opposition to the specific reforms, particularly by those who have gained from the status quo. Second, and probably more important, many believe that the pace of the cuts in government spending is too fast. In the worst case, there is a vicious circle where cuts in spending lead to job losses which lead to less private spending which leads to a shrinking economy which leads to lower tax revenues, which leads to the apparent need for still more austerity.

Greece is in the fifth year of a terrible recession and most Greeks, and many outside observers, blame excessive and mismanaged austerity measures. Most American analysts, including me, tend to agree that the pace of mandated budget cuts has been unrealistic. However, the German view, supported by some other countries as well, is that it will be impossible for the Greek economy to recover until businesses and households see that the country can put its finances on a sound basis. Further, they believe that Greece has failed to make many of the promised structural reforms and will be even less willing to do so if the pressure is taken off by easing the conditions now.

There is a growing consensus in Europe that the austerity measures in Greece and the other troubled countries may have to be slowed somewhat or offset in other ways. The new President of France, François Hollande, is a particular advocate of this approach and the most important skeptic, Germany, appears to be moving towards at least partial acceptance of the ideas. The most likely compromise appears to be for various investment projects to be started or accelerated in the vulnerable countries in order to pump additional money into their economies while hopefully also creating useful infrastructure. The European Investment Bank (EIB) is almost certain to be given additional funding for this purpose, which has the advantage that commitments of capital by the national governments to the EIB are then levered up by EIB borrowings from the markets to supply a greater sum of project loans. There are also discussions of loosening the conditions on regional aid that is provided to Greece and other poorer countries, and possibly redirecting some of the funds towards Greece, in order to increase the amount effectively available in the near- to medium-term. Other investment programs may well be created in the same vein. The net effect of all these actions, although unlikely to be huge, would be to reduce the pressure on economic growth from the austerity measures.

The stronger countries in the euro area could also rebalance their economies to help the weaker with their very difficult transitions. Germany, in particular, has come under a great deal of pressure to find ways to increase its level of consumption and thereby to also reduce its trade surpluses. Such a boost to consumption would increase the demand for imports from the periphery of Europe, as well as from the rest of the world. Similarly, there has been strong pressure to allow Germany's inflation rate to rise mildly from current levels, on the theory that much of the work to be done by the troubled nations in Europe involves changes in the relative cost of their exports. If Germany ran a 1 percentage point higher inflation rate for 5 years, this would essentially contribute five more points of price adjustment that would not have to come from direct cuts in nominal wages and other costs in the troubled nations. In

practice, it is easier to persuade people to accept cuts in their real incomes that come through a failure to match the inflation rate than to accept outright wage cuts, so higher German inflation would make changes in the troubled countries easier. A full discussion of these complicated rebalancing issues, including their disadvantages, would be very complicated and goes well beyond the scope of this paper.

What is likely to happen in the Greek elections?

Two major parties have dominated Greece since the fall of the military junta in 1974: PASOK, a socialist party, and New Democracy, a center-right party. These two parties had formed the coalition government that brought in the highly-respected technocrat Lucas Papademos as prime minister. They supported the bailout agreement that he negotiated with the troika and continue to do so, albeit calling for some modifications. Their support for the agreement cost them dearly in the May elections, when their combined support fell to about 30%, far below any previous post-junta election. However, their combined seats in parliament still came to almost half, because New Democracy earned the 50 seat bonus, out of 300 total seats, given to the party which receives the most votes.

Parties that were traditionally minor, or were newly formed for this election, won the rest of the seats. In particular, Syriza, a party of the hard left, came in second with 17% of the vote, versus 19% for New Democracy. No set of parties was able to form a coalition that would have the necessary 151+ seats. The pro-agreement parties had 149 seats, but could find no allies willing to stand with them. At the same time, the rejectionist parties were too disparate to ally together in a coalition that would have spanned the range from neo-nazis to the hard left. The result was the call for a new election on June 17th.

The key election result will be whether Syriza or New Democracy gets more votes and therefore gets the 50 seat bonus. Unless there is a dramatic change from what the polls have been showing, it will be one of these two parties that wins. PASOK will almost certainly come in third, but appears to have little chance of doing better than that, in part because it was in charge of the government as the recession blossomed and voters remain angry.

It is impossible to tell which of the two leading parties will have the plurality and therefore the seat bonus. Six polls on the weekend of May 26th and 27th showed New Democracy having retaken the lead from Syriza by anywhere from half a percentage point up to five and half points, with PASOK a distant third. However, this is a very thin lead given how volatile voter attitudes are likely to be in the next several weeks.

If results of the current polls hold up, New Democracy and PASOK would likely have 160 seats or a bit more between them, enough to form a government, and they might be able to attract one of the smaller parties to join them and provide some margin for error. If Syriza overtakes New Democracy, there is a good chance that they will be able to form a coalition with other rejectionist parties. However, there is also a possibility that the disparities among the parties may be too great to form a coalition and there may need to be yet another election within about a month. One thing we can almost certainly rule out is a grand coalition that includes Syriza and one or both of the mainstream parties. There is simply

too large a gap between their positions on the bailout and Syriza will be anxious not to be seen as being co-opted by the traditional parties whose alleged moral corruption their leaders have denounced.

What will happen after those elections?

If New Democracy wins the plurality and forms a government with PASOK, they will then face the very tricky issue of negotiating some modifications with the troika. This will be necessary for three reasons. First, a clear majority of the Greek voters will almost certainly have voted for rejectionist parties even if the 50-seat bonus rule gives the two mainstream parties a majority of seats. The new government will have to show some respect for that outcome and will wish to avoid being seen as patsies or tools of the troika. Second, even the mainstream parties have pledged to ask for some concessions. Third, there is a high likelihood that Greece will be unable to meet all of the conditions of the current agreement, due to the continuing deterioration in its economic situation combined with problems caused by the political chaos. It will probably make more sense to forestall this failure by modifying the agreement up-front, while there is still room to claim the political benefit of gaining concessions from the troika.

For its part, the troika will have strong incentives to find a compromise that bolsters the new Greek government while preserving enough of the original agreement to meet the troika's core objectives, including the avoidance of incentives for other troubled countries to substantially renegotiate their own agreements. Certainly, the troika will not want the new government to fall and trigger another election in which the rejectionists might easily win after the failure of the pro-agreement parties to find a compromise with the troika. The devil will be in the details, but it seems highly likely that some compromise could be worked out that, at the very least, defers a confrontation for another six months, and hopefully would provide a sound basis for going forward.

There will be interesting tensions within the troika that could complicate the negotiations. For example, the IMF will be torn. On the one hand, they have reportedly been the most skeptical of the troika members about insisting on such a high degree of austerity in a short space of time, which suggests they would be more open to compromise with Greece. On the other hand, one of the IMF's most valuable assets is that it has some credibility in the conditionality that it places on its loan disbursements. That is, they try to negotiate a viable plan up-front that includes austerity and necessary reforms and then they disburse funds over time, but only on the basis that agreed steps are actually taken. Many observers have questioned whether the first Greek rescue agreement was credible even at the time it was created and the current agreement, which is the second, has similarly been questioned. Modifying it yet again in a major way would leave the IMF open to further criticism that would call the credibility of its conditionality into question, either because the original plan was viewed as flawed or because the IMF was seen as giving in to political pressure to weaken its conditions. This might mean that the IMF would be unwilling to accept a compromise plan that would buy six months or a year, but ultimately prove no more workable than the two earlier plans. For their part, the European members of the troika could find such a temporary "solution" potentially attractive, given the benefits to the euro area of buying some additional time to prepare for the consequences of a potential Greek exit.

If the IMF is seen as too accommodating to Greece and Europe it would also play into continuing criticisms that the IMF has a structural pro-European bias in its governance. There has been an informal agreement among key voting blocks since the IMF's creation that its head would always be a European, as Madame Lagarde is. In addition, voting in the IMF is disproportionately weighted towards Europe (and the U.S.) compared to the economic weight of these countries in the world today.

If the negotiations within the troika are too difficult, it could even lead to a modification of the agreement whereby the Europeans step up to fill in the gap left by a withdrawal of the IMF. Obviously, all parties will try to avoid this, since it would call into question the credibility of the new agreement, but it remains a possibility.

If Syriza, instead of New Democracy, wins a plurality, and manages to form a government in coalition with other rejectionist parties, the situation will be trickier still. The Greeks will attempt to negate, or very considerably modify, the agreement with the troika, while avoiding having to withdraw from the euro area. However, an exit could occur anyway. There is a small chance that the situation would evolve to the point where the new government actively decided to withdraw from the euro or force the euro area to effectively kick it out. Worse, there is a substantially higher likelihood that an exit could result from misjudgments and miscommunications rather than a truly considered choice as to whether rejecting the agreement or staying in the euro area was more important. The probability of this is raised substantially by the incentives for many of the players in this complex political and diplomatic game to take negotiations to the brink of collapse. Knowledge of the game theory used in nuclear confrontations may prove to be as useful as traditional political and economic analyses in understanding future developments.

If Syriza has the plurality of votes, but is unable to assemble a coalition, there will very likely be a third election by the end of July. This would leave the real possibility of Greece running out of money between elections, however the troika would very likely disburse enough funds to ensure that this did not happen. It is one thing for them to face down a confrontational new government and another thing for them to allow disaster simply because the Greek public has not quite made up its mind yet. Further, there is a good chance that a squandered Syriza plurality would strengthen the hand of the mainstream parties in the third election, which the troika would very much like, giving them a stake in avoiding being blamed for the Greeks running out of the money to pay their bills before the election.

How might a Greek exit develop?

A Greek exit from the euro area is only likely to happen in the near-term if there is a Syriza-led government after the election. (The long-term will depend on the development of a wide range of factors on which there is considerable forecasting disagreement.) A new Syriza-led Greek government would face the problem that it would run out of funds almost immediately without further disbursements from the troika.

The European Commission projects a Greek deficit this year equal to about 1% of the size of the country's economy, even excluding payments on national debt. Unfortunately, these projections would

almost certainly prove to be significantly optimistic in the turmoil that would occur after a Syriza victory. Tax revenues would fall, both because of the hit to business and consumer confidence, and because there would be a tendency to hoard euros and wait to make tax and other payments until after a potential euro exit and devaluation.

There is a high probability that a Syriza-led government would be unable to reach an early agreement with the troika, meaning that it would face a cash shortfall. There is no real potential for anyone else to voluntarily supply the necessary funds, leaving three main possibilities. The government could cut expenditures enough to eliminate the shortfall. In practice, it may well be able to find a few expenditures to cut, including any payments of interest or principal on its remaining debt, but its vow to resist austerity will almost certainly mean these cuts will be insufficient on their own. A second possibility is some form of expropriation, in which it seizes assets and uses them to fund the shortfall. This cannot be ruled out, especially if the struggle with the troika lasts for a long time, but it would clearly have grave political and economic costs. It would certainly not help with already fragile business confidence.

The third course of action, and in my view the likeliest, is to sort-of pay its bills. That is, the government would declare its intention to meet all of its legal obligations, but use IOU's for a portion of what it owes, until it has successfully resolved the troika negotiations or found another source of funds. This is similar to what the State of California did in the financial crisis and which that state and other governments have done at times in the past. The Greeks could issue notes that are payable at some point in the future and even promise interest payments at whatever rate the government decides to offer. There would be a considerable political cost to this course as well, but it seems likely to be somewhat more palatable to voters, especially as it would be presented as temporary and may appear to have been forced upon Greece by the unwillingness of the troika to compromise. There would also be an economic cost, in addition to political considerations, since this route too would hurt business and consumer confidence. It would also lower the effective purchasing power of those receiving the notes, as the IOU's would not be convertible to cash at full value prior to maturity.

The use of IOU's could conceivably stretch the period of negotiation and confrontation with the troika for quite a long period, as long as the banking system avoids massive runs or the ECB remains willing to provide liquidity to the Greek banks. This is a big "if", though. Confrontation with the troika that does not lead fairly quickly to some form of compromise reopening official funding sources for Greece would almost certainly cause large withdrawals from the Greek banks. This could be offset by liquidity provision to those banks from the ECB or from the Greek central bank with permission of the ECB. (The system of central banking in the euro area consists of national central banks, working under the coordination and rules of the ECB.) However, there is a strong possibility that the ECB, as one of the troika members, would be unwilling to take on significant new Greek risk, even indirectly, while the Greek government is taking a hard line against the troika.

The likeliest trigger for a Greek exit from the euro area would be massive bank runs that are not countered by the ECB. Greece could nationalize the banks, but this would not solve the problem. It

would not work to recapitalize the banks with Greek bonds or IOU's, given the strong suspicion of a future default on those obligations. If the banks began paying out their depositors in IOU's it would effectively be a default, given the lack of credibility of those IOU's, which would have severe consequences. We witnessed a few years ago what happens to an economy when the financial system freezes up. Widespread bank defaults would have a still more severe effect on economic activity.

Faced with the virtual certainty of a depression, the Syriza-led government could compromise at that point with the troika, and particularly the ECB, to restore its banking system and overall finances. If it were unwilling to do so, a withdrawal from the euro might look attractive at that point, as it would already be suffering from many of the ill effects associated with such a withdrawal, but without the advantages that would also come with a pullout. Setting up a new currency, perhaps called the "drachma" after the pre-euro currency, would allow the government flexibility to adjust its interest rates and exchanges rates. Of course, world markets would have even more say on the exchange rate and, once external funding began trickling back to Greece, would influence its interest rates.

Abandonment of the euro would be very painful for Greece, but also for the rest of the euro area, as described below. Syriza's best hope, and the card it is already quite openly playing, is that the damage to Europe of a Greek withdrawal is of uncertain magnitude, but could be immense. Greece would suffer worst, but it would not suffer alone. Thus, there are certainly pressures on the troika to considerably ameliorate the austerity measures if that is what is necessary to reach a compromise with the new Greek government. At the same time, strong enough movement in that direction to satisfy Syriza would carry very heavy costs for the troika and for national governments of major creditor countries such as Germany. Leaders of these institutions and countries would appear weak and willing to commit taxpayer money to aid a nation that will be viewed by many as not having met its commitments even under the previous government and to be undertaking economic and political blackmail. Major compromise would also incite other troubled countries to make new demands themselves. All of this means there is a strong incentive for the troika to hold to a hard line and wait for the new Greek government to fall or cave in.

In sum, both sides at the negotiating table will have real incentives to engage in brinksmanship, much as in nuclear strategy, where there can be significant advantages in appearing so irrational or committed to a course of action that one would be willing to blow up the world to get one's way. This makes for a very scary situation, full of the potential for miscalculations, even if an optimist might point out that the concept of nuclear "mutual assured destruction" has not yet caused the world to go up in flames.

In addition, unlike with nuclear strategy, brinksmanship in this context runs smack into the power of financial markets. Any negotiating strategy of brinksmanship that is strongly convincing to the other side of the negotiations may cause market panic, which could cause contagion to sweep across Europe.

What would the damage be of a withdrawal by Greece from the euro area?

Whatever the medium to long run advantages and disadvantages for Greece in returning to its own national currency, few seriously dispute that the Greek economy would be badly damaged in the near-

term. There is no legal mechanism for withdrawal from the euro without also withdrawing from the European Union and even that procedure would take much longer to negotiate than would actually be feasible in this type of withdrawal situation. Therefore, we find ourselves in uncharted legal waters where the Greek and other governments would be making ad hoc decisions and trying to negotiate to limit the damage. This guarantees a huge amount of uncertainty that would weigh heavily on the Greek economy. Few businesses or individuals would dare to invest in Greece in the short run and everyone who could do so would increase their precautionary savings by cutting expenditures to the bone, and there would be huge incentives to move funds out of Greece, despite capital controls that would undoubtedly be put in place.

Many corporations and some individuals would also be bankrupted by the resulting exchange rate movements. The drachma would plunge in value compared to the euro, even though the initial official exchange rate would almost certainly be one-to-one. Anyone who owed money to non-Greek parties in euros could well find that they have to repay that debt with much-depreciated drachmas, making their debt burden much bigger. External financing would also virtually halt, adding to the credit squeeze. Political uncertainty would add its own cost, as there is a considerable likelihood that any government that pulled out of the euro and inflicted these transitional costs on the Greek public would be thrown out of office. All of this, and the riots that might also occur, would be likely to smash the tourism business for some time until relative stability is restored.

In the longer run, a depreciated drachma could make tourism in Greece and exports to other countries much more attractive, allowing Greece to regain access to foreign funds by running a trade surplus. I write "could" because it depends heavily on what else affects the prices and quality of exports and of tourism. In particular, inflation would almost certainly shoot up initially, triggered by rising costs of imported goods, among other factors, erasing some of the advantage of the price reduction for exports created by the exchange rate movement. Costs would also rise because interest rates would soar due to high inflation and fears of future inflation. In theory, it would be possible for the major segments of Greek society, including the unions, to develop a wage-price policy that would ensure that exports did indeed become more competitively priced. However, this is difficult to do under the best of circumstances and Greece would be trying it under the worst.

Ironically, the Greek government might well have to impose even harsher austerity, as a result of a cutoff of external funding, partly as a reaction by foreign nations to the Greek withdrawal and partly because the private sector would become even more leery of putting funds into Greece until things bottomed out.

Greece would not be the only country to suffer, by a long shot. As described below, fear of withdrawals from the euro area by other troubled countries would create serious contagion effects which would have much more effect on the European and global economies than the troubles in the relatively small country of Greece.

Why might other countries exit?

Beyond Greece itself, the demonstration that a country really might leave the euro area raises the possibility that others might also fall out. None of the other euro area nations want to abandon the currency, since they would be subject to the same terrible transition costs and uncertain future benefits that Greece would face. However, there is a real chance of one or more of those nations involuntarily having to withdraw. The very possibility generates self-protective reactions that increase the likelihood of an exit, a phenomenon often called “contagion,” analogous to the spread of a disease. The most obvious feedback mechanism would be a bank run in Portugal, Spain, or other countries considered to be the most vulnerable. A run on the major banks in a country could create an untenable situation that eventually results in a withdrawal from the euro.

Portugal is probably the most vulnerable, given its troubles, but the market’s focus has been on Spain because of its considerably greater size. Some Spaniards are already moving their euros out of the country, or exchanging them for other currencies, in order to avert the possibility that their euros will suddenly be involuntarily converted into a new national currency, call it the “peseta” after the pre-euro Spanish currency. The fear comes because there is little point in a nation moving to a new currency unless its exchange rate will be allowed to fall markedly. Unfortunately, these withdrawals could turn into a classic bank run which could bring down the Spanish banks, requiring a large bailout from the Spanish state or its European partners. This could easily become so expensive that Spain could not handle it on its own and would need to turn to its euro area partners. The euro area as a whole has the financial resources to back up Spain and its banks, but the total level of guarantees or actual injections of euros could run well over 1 trillion euros, which would bring many political difficulties for national governments in the stronger nations that would be backstopping Spain. Further, there would be the real possibility of the contagion spreading to Italy, which has its own real weaknesses, more than doubling the size of the problem. Even France is not completely immune if the panic were to spread widely.

What can the euro area do to stop further exits?

If contagion from an actual or feared Greek exit from the euro area spreads to other troubled countries in a major way, European leaders would need to react strongly and quickly if they wish the euro not to unravel. If a second nation were also to be forced to withdraw, even one as small as Portugal, the contagion would become so strong that it could well knock out Ireland, Spain, Italy, and potentially even France unless extremely strong measures were taken very quickly. Even then, it might be too late. Thus, Europe has a very large stake in preventing any further withdrawals whatsoever, since each one makes the next more likely.

The worst vector of contagion would be the national banking systems of the troubled nations. The euro area would need to demonstrate that it would provide the funds needed to meet the liquidity needs of these banks. The best way to stop a bank run is to figuratively show up on the doorstep with large piles of currency ready to pay out anyone who wants their funds. This reassurance can lead to many people abandoning their withdrawal requests as their fear subsides.

In the short run, the mechanism would be for the ECB, working through the relevant national central banks, to agree to loan the banks in the vulnerable countries unlimited sums at a low interest rate, as long as they can provide collateral to the central banks that meets quite relaxed minimum standards. The national governments of these countries might have to guarantee some of the collateral in order to bring it up to even these relaxed credit standards. They would also, very likely, have to inject capital into, or take over outright, many of the weaker banks. This would very probably require the governments to borrow from one or both of the euro area rescue funds, the EFSF and the ESM, which themselves are funded or guaranteed collectively by the nations in the euro area. Finally, there would need to be a backstop for the various national deposit guarantee funds in order to reassure depositors that they need not fear losing their money if a bank fails. Such a backstop would also likely be from the EFSF or ESM, possibly through guarantees provided in the first instance to the governments of the troubled countries.

In the longer run, it would be much better to have guarantee funds and strong bank supervision conducted at the European level. This would take too long to establish for it to directly help with the immediate crises that would be engulfing the troubled countries, but the announcement that Europe would take these steps would still be helpful as a sign of the full commitment of stronger national governments to help the weaker.

These steps to aid the vulnerable banks would be necessary in order to reassure everyone that the banks could survive the turmoil. Unfortunately, such steps do not deal with the central fear that depositors might end up owning pesetas when they thought they owned euros. Thus, Europe would need to send very strong signals that there would be no further exits from the euro and no further need for such exits. This might well require commitments to fund Spain or Italy if the financial markets ceased to be willing to provide the money at sustainable interest rates. (If the rates go too high, the interest payments themselves could make the existing high debt levels unsustainable.)

One of the strongest ways that the core countries of the euro area could signal their support for the weaker members is by taking measures to pool their funding. For years, there have been proponents of so-called "Eurobonds" which would be issued by national governments, but would have guarantees of repayment from all of the euro area nations. Given the overall strength of the euro area, which is similar in size and soundness to the U.S., when viewed as a whole, these bonds would bear quite low interest rates. One drawback, of course, is that it requires Germany and other strong members of the euro area to take a chance on whether all of the other euro area countries are fiscally sound and will repay their bonds. If they do not, the stronger countries would absorb the cost. Related to this, the ability to borrow without reference to one's own creditworthiness considerably reduces the incentives to have responsible budgets and economic policies. Borrowing as an individual country creates an interest rate cost to irresponsibility that would be mitigated by a Eurobond issuance. For these reasons, the government of Germany has been strongly opposed to Eurobonds, at least until such time as fiscal measures have been put into place that considerably reduce those risks.

However, Eurobonds are only one way of mutualizing the credit risk and therefore extending effective interest rate subsidies to the weaker members. In an emergency, it seems likely that one of the other approaches may be adopted. For example, Germany has been signaling a willingness to consider a form of Eurobonds that would be used solely for approved investment projects. These project bonds would not be nearly as effective in reducing total borrowing costs, due to their smaller size, and they would not provide the same visible vote of confidence for the markets, but they are a step in the same direction. There are also discussion of Eurobills, which are effectively short-term Eurobonds. Their short-term nature, and the ability to stop their issuance, mitigates some of the incentive problems created by Eurobonds. There are also ways to use the EFSF and ESM to effectively mutualize credit risk and these could be considerably expanded as a quick way to provide some of the same benefits.

The exact approach matters, but the real key is to provide the clear support that would come with a mutualization of part of the credit risk, combined with the resulting lowered borrowing costs for the troubled countries.

Ultimately, these various measures could run into trillions of euros of funding and guarantees for the troubled sovereigns and their banking systems. In the extreme, if contagion spreads massively, the sheer level of guarantees from and funding demands on Germany and the other strong countries could become so heavy that their own creditworthiness becomes suspect. However, political constraints are likely to kick in well before such levels were reached. This is the real danger if contagion spreads too widely, that one or more key national governments might decide that the political or economic costs of preventing further euro exits has crossed the line into the unacceptable range, even in the face of the disaster that would ensue from widespread withdrawals from the euro area. By blocking the necessary guarantees to restore public confidence, this reluctance to step forward would put one or more troubled euro area countries in an untenable position which could lead to an exit from the euro, much like that described in the Greek exit scenario.

The problem of the euro in a highly stressed scenario is the same as for any other currency. It has value primarily because people treat it as having value. It is true that a currency will always be accepted for payment by its own government, but most of the money people spend is not with their governments and therefore relies on the willingness of others to accept it. There can be no guarantee that the euro area can hold together with its full current membership, in part because once the existential question is raised it is hard to credibly answer it without massive commitments by credible parties. This can work if the euro area only needs to backstop a few smaller countries, but becomes harder if markets panic and begin to believe that Spain and Italy or even France are in serious question.

In the extreme scenario, there would be a series of exits, leaving only the stronger countries still in the euro. Those that pulled out would experience deep recessions, even depressions, as they suffered the transition costs of exit and dealt with the implosion of their banking sectors and much of their business community. They would also wrestle with high inflation. On the positive side, their export situations could improve considerably due to massive devaluations, once things eventually settled down, unless fully offset by higher inflation or other problems.

Those nations that remained in the euro would suffer the knock-on effects of the troubles in the rest of Europe, especially since much of their exports go to those countries, whose purchases would fall off dramatically for at least awhile. As things settled down, they might find that the value of the euro appreciated substantially, without the drag from the weaker countries, hurting exports of the remaining euro area on a more permanent basis.

Having laid out the most dire scenario, I should emphasize that there are many ways in which the euro area might avoid getting to that point. This includes the likely possibility that even Greece will pull back before getting to the point where it would exit the euro, especially as the large majority of the public wants to avoid leaving the euro area.