

Finland and the EMU: costs, benefits, and the way forward

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Abstract

The membership of Finland in the euro zone has been described either as a great success or as a complete failure. However, no rigorous analysis on the benefits and costs of the euro zone to Finland is available. In this report, we analyze what would have been the economic consequences, if Finland had never joined the euro area. Our analysis is based on a simulation of the external value of the currency of Finland, if Finland would not have joined the euro. Using the theoretical exchange rate of the Mark of Finland, we simulate the value of the export of Finland. We also compare the performance of the economy of Finland of that of Sweden. According to our results, having her own currency would have greatly increased the export of Finland after the financial crisis of 2008. Still, our analysis suggests that Finland should not leave the euro zone at current time.

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Introduction

Within the last four years, the euro area has witnessed two major economic crises, as the financial crash in 2008 facilitated not only the deep recession, but also the debt crisis two years later. The 2008 crisis thus revealed the fundamental problems of the currency area, tackled since then by its leaders.

An extensive analysis on the effects of the euro zone on the economy of Finland was given by Sixten Korkman, the leader of The Research Institute of the Finnish Economy in 2009 but things have changed since then as the financial crisis brought up several problems that were not discernible in 2009.¹ For example, in 2009 the government of Greece was still able to borrow from the financial markets, which is now utterly impossible.² No sovereign bonds existed in the European Central Bank's (ECB) balance sheet of and no one had ever heard about the European stability facilities. Maybe the most pronounced change is, however, that asymmetric shocks have realized just as some prominent economists warned in the 1990s.

Martin Feldstein from the National Bureau of Economic Research emphasized that Euro could amplify the negative effects of the business cycles and rise unemployment in the member countries (Feldstein 1992). His concerns have now realized. The economists of the European Commission also warned that, in a currency union, the currency risk transforms into a default risk (Evans-Pritchard 2010). Once the currency fluctuations are eliminated, only the yields of government bonds can reflect the changes in productivity and fiscal position in a country. The mispricing of the country risk in the bond markets greatly increased the risk of such transformation during the first years of the euro zone. Actually, the markets have acted as the euro zone were a single country, even though the fiscal balances in some countries were obviously not sustainable. Figure 1 illustrates the convergence of the bond yields to those of the German bonds from 1993 to 2012.

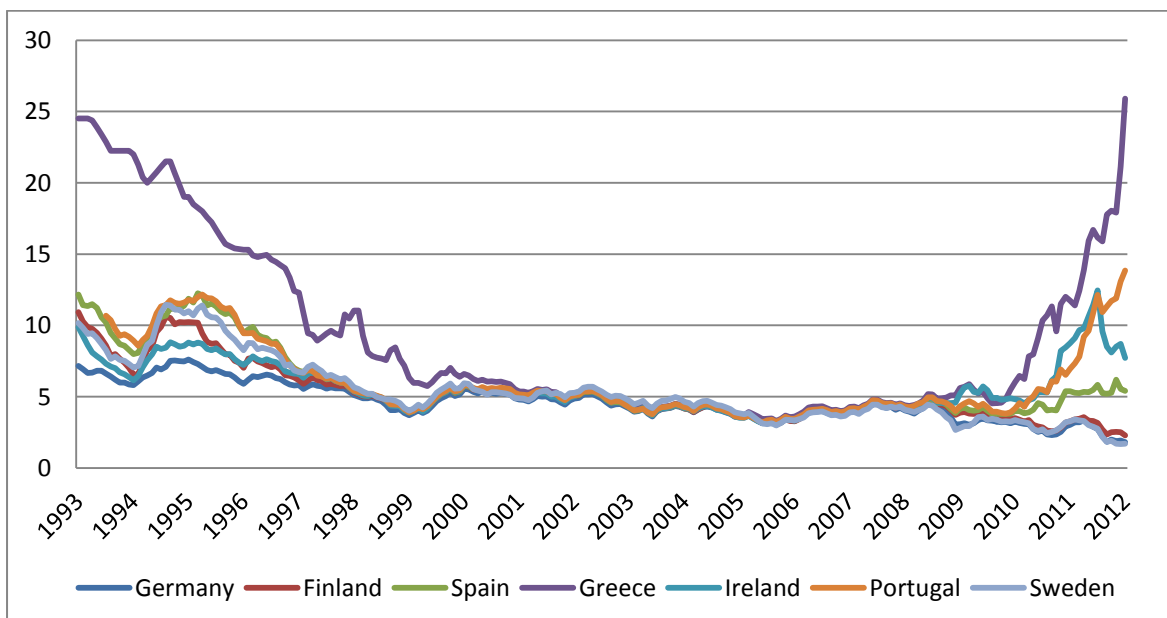


Figure 1. Yields of 10 year bonds of selection of euro zone countries. Source: ECB.

¹ Korkman has discussed these new developments briefly in 2011.

² The yield for the Greece's one-year bond surpassed 1000 % in week 10.

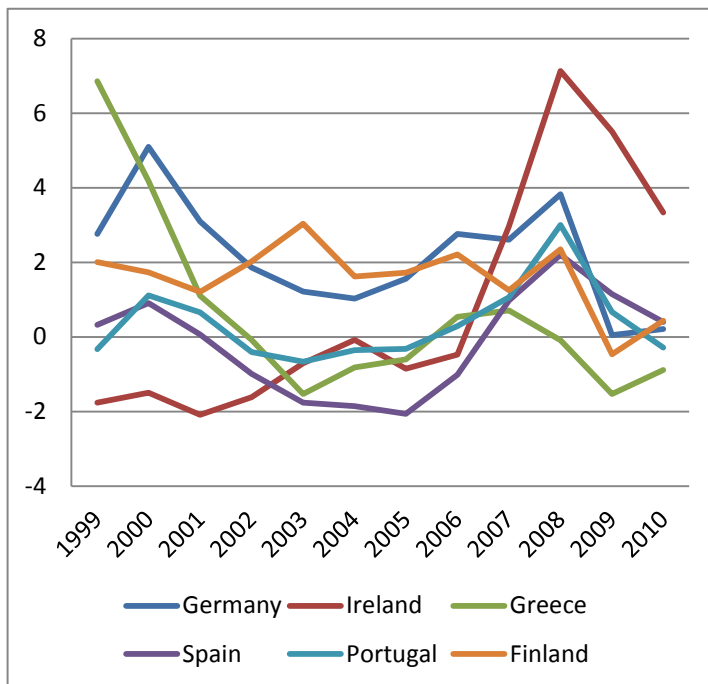


Figure 2. Real interest rates of few euro zone countries. Source: AMECO.

For this reason euro zone was a kind of a “Jackpot” for periphery countries, like Greece and Portugal. Under the euro zone, they could borrow with just a fraction of the borrowing costs they faced before. The problem was that many countries invested their fortune poorly. The cheap new credit was used to fund government deficits instead of investing it in infrastructure, for example.

One of the concerns was that different inflation rates would lead to grave productivity differences between countries. This would make it very difficult for the ECB to find the correct interest rate (Feldstein 1992). Figure 2 gives the real interest rates, i.e. the difference between inflation and the benchmark interest rate in selected countries on the euro zone from 1999-2010.

It is evident from Figure 2 that the interest rate set by the ECB was too low for many crisis countries at the beginning of the euro zone era. The real rates were negative for several years in Greece, Spain, Ireland and Portugal. Negative real rates can be justified to stimulate investment when economy is contracting but when the economy is already growing, negative real rates tend to cause overinvesting. It is thus likely that the low interest rate was one reason for the real estate bubbles in Ireland and Spain.

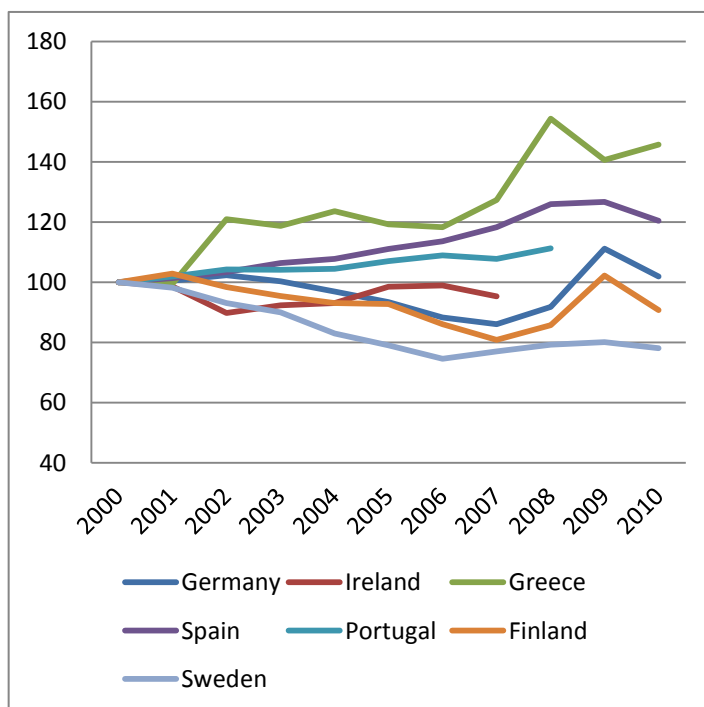


Figure 3. Nominal unit labor costs for manufacturing industry (2000=100). Source: AMECO.

The differences in the inflation rate have also created differences in competitiveness between the euro zone countries. Figure 3 gives the nominal unit labor costs for manufacturing industry.

In general, one may conclude that the monetary policy of the ECB has been too loose for many of the euro zone countries. Obviously, the consumption-share-weighted inflation measuring technique has not worked optimally because it has masked the differences in the inflation rates across countries. As ECB sets its benchmark interest rate according to the consumption-share-weighted inflation

rate, this means in practice that the interest rate is set according to the inflation rates of the biggest and wealthiest countries, which are Germany and France. This might not be a big problem if there were no business cycle fluctuations and the job market in the euro zone would work properly. Nevertheless, business cycles do happen and in recession production will first be removed from the countries with the lowest productivity. This poses a problem as the citizens of the euro zone do not have a common language and the cultural differences between countries are large. Therefore, the labor force mobility on the euro zone is much lower than in, say, the United States. Under the circumstances of perfect labor mobility, workers move from the low to high productivity countries. In the low productivity countries, the demand for domestic goods decreases, pressing wages and rising productivity. The opposite happens in the high productivity countries and the productivity difference between countries disappears. Instead, currently only the production moves, thus generating unemployment in the low productivity countries. As the work force does not migrate *en masse* within the euro zone, the productivity disparity leads to falling GDP and increasing unemployment in the low productivity countries. Therefore, the differences in the inflation rate across countries should be watched closely and the suitability of the consumption-share-weighted inflation rate should be questioned. A simple geometric mean of inflation rates on the euro zone would probably be a more preferable way for measuring the inflation in this area.

Table 1. The average inflation rates of some EU countries from 1999 to 2011.

	Germany	Ireland	Greece	Spain	Portugal	Finland	Sweden
Mean	0,82	1,94	3,41	3,37	2,71	1,50	1,62
Sd deviation	0,62	3,75	0,99	1,65	0,95	1,21	0,75

From Table 1 and Figure 1 can see that the interest rate policy of the ECB has followed the inflation rate of Germany. In many of the crisis countries the inflation rate, however, has been notably higher than that of Germany. In addition, the inflation rate has fluctuated a lot, indicating that the standard deviation of inflation has been quite large in many countries. It should be noted that the inflation rate has been much lower in these countries during the euro than before it.³ What is interesting for Finland is that although the inflation rates have been almost identical in Sweden and in Finland, the standard deviation of inflation has been somewhat higher in Finland.

As the current analysis clearly states, the euro area has become an economic burden to some member countries. It thus poses a relevant question, has the euro area benefitted Finland, and should we continue as a member? In this report, we make a simulation-based evaluation on the economic benefits and costs of the euro zone to the economy of Finland. We compare the hypothetical values of Finnish exports in the case where Finland would not have joined euro to the actual values of exports. We do this by simulating the value of the currency of Finland, the Mark, from the beginning of 1999 to the end of 2011. By using this hypothetical value of Mark, we simulate the value of the export of Finland in the case if she would not have joined the euro to begin with. In addition, we dwell on the question whether it is economically reasonable for Finland to stay in the euro zone.

³ But it should also be noted that inflation rates across the developed world have been diminished in the beginning of the 21st century.

Background of the analysis

When considering the costs and benefits of the euro zone one of the most interesting questions is how the values of the national currencies would have behaved if they had coexisted together with euro. By using the scenarios above one can assess, for example, how the export of a country would have evolved, if the country had never joined euro.

Similar reservations that need to be done with any simulation experiments apply to this study as well. Simulating a state of the world that has not been realized crucially depends on the assumptions made when the scenario was created. This is the fundamental reservation in terms of the results in this report. However, we believe that, by using the assumptions described briefly below, we are able to construct a model that gives a reliable view of the trends that the variables in question would have followed in our hypothetical scenario of Finland not joining euro.

The idea is to construct a statistical simulation model that gives the theoretical values of Finnish Mark against euro during the period that Finland has been a member of the euro zone. Combining these simulated values of Mark with other relevant macroeconomic variables we construct a simulation model which indicates the value of the export of Finland during the period in question.

The following assumptions are made to simulate the value of Mark after 1999 (when it was changed to euro.)⁴ The most important assumption is that everything that has happened in the world economy after 1998 would have happened exactly in the same way even though Finland would not have been a member of the euro zone. As Finland is a small country, we think that this exogeneity assumption is realistic. In contrast, if Finland exits euro now, it would most certainly bear some effects on the other euro zone countries. We return to this issue later on. It should be noted that this assumption would not be realistic in terms of bigger euro zone countries such as Germany. This restricts the usefulness of our counter-factual analysis in terms of the other members.

The second assumption is that all the current members of the euro zone would have joined euro even though Finland would not. We think that this assumption is quite realistic as well. The third assumption is that Finland would have made all the necessary arrangements to join euro, even if she did not join. In other words, we are assuming that the economic development of Finland would have been the same until the end of 1998 whether she had joined or not joined. Fourth assumption is based on the fact that the Bank of Finland would have adopted essentially the same monetary policy as the Riksbanken, i.e. the central bank of Sweden (see Korkman 2009).⁵

The analysis is fundamentally based on the exchange rate between the currency of Sweden, Krona, and euro. Furthermore, it turns out that the exchange rate between Mark and Krona followed each other quite strictly several decades until Mark was connected to the EMU on the 1st of January 1999. Figure 4 presents the exchange rate of Krona and Mark with respect to euro from 1960 to 1998.

⁴ The latest data we are using in our analysis is from the third quarter of 2011.

⁵ In principle, Finland could have chosen another stance on the monetary policy compared to Sweden, which would naturally had an effect on the exchange rate of Finnish Mark. However, it is nearly utterly impossible to evaluate what would such deviating monetary policy been. Overall, it seems plausible to assume that the monetary policy in Finland would have followed the same path as Sweden as it has done so also in previous times. This leads us to conclude that Finland would have probably followed essentially the monetary policy set by the ECB, like Sweden has done.

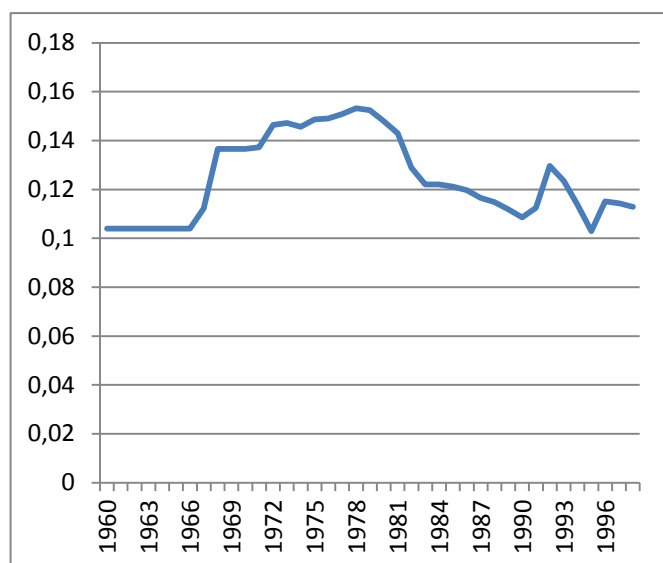


Figure 4. The relationship between Mark and Krona from 1960 to 1998. Source: European commission.

Figure 4 shows that the relation between Mark and Krona has been very stable from 1960 onwards. A large number of academic studies on the predictability of the exchange rate has suggested that it is rather difficult to forecast the future development of a single currency rate. This is because exchange rates are often found, at least approximately, to follow a *random walk* implying that the future values of the exchange rates are unpredictable. This is also the case with the exchange rate between Mark and Krona. It turns out that the random walk hypothesis cannot be rejected at the traditional statistical significance levels. However, Figure 4 shows that the association between Mark and Krona has been quite stable through time. This means that the values of these currencies have moved in syn-

chronization, i.e. as the value of Krona falls, so does the value of Mark. In other words, it seems that there is a long-run equilibrium relation between the currencies around which their actual values have fluctuated. This makes Krona an excellent basis to estimate the theoretical value of Mark for the period Finland has been a member of euro.

The reason why there has been so little variation in the exchange rates of Mark and Krona is that the countries lie in a close proximity and have markedly similar social and economic structures.⁶ Both are Nordic welfare states and both have large export sectors. Neither of the countries has heavy reliance on primary production unlike, say, Norway.

The starting point for our simulation model is to ponder the rate of interest that Finland would have faced if she had not joined euro. As is visible from Figure 1, the integration of the world has led to converge of the yields of the long-term government bonds, especially within the EU. In our analysis, we use the long-term interest rates, i.e., the 10-year government bonds. The yields of these long-term bonds reflect several aspects of the economic state of the sovereign states. According to economic theory, the long-term interest rates are equal to the discounted future values of the short-term interest rate which are, of course, tightly connected to the interest rate targets of the central bank. However, there is a rather large amount of evidence in the economic literature that even though this “expectation hypothesis” for the term structure of the interest rates does not hold strictly, it can be used to approximate the development in the long-term yields. In addition to the expectations on the future monetary policy stance, the long-term yields also reflect the risks that countries may have in the longer run, which are clearly visible in Figure 1. The high yields of sovereign bonds reflect the mistrust on the long-term economic prospects of a country.

In light of the assumptions made above, there is no particular reason to assume that the interest rate of Finland would have systematically been different from that of Sweden or the interest rate within the euro zone. However, as Finland is a smaller economy than Sweden, we cannot completely rule out the possibility

⁶ Finland and Sweden have almost identical systems of social insurance, for example.

of speculative attacks against the Mark of Finland. Taking this into account, we expose the interest rate in the simulation model to a stochastic component such that the average interest rate in Finland is ten basis points higher than in Sweden (or in the euro zone).

In the simulation model, we first construct the exchange rate between Mark and Krona using the equilibrium association given in Figure 4 and the interest rate differential between Finland and Sweden as illustrated above. Basically, we are thus assuming that the equilibrium association would have after 1999 when Finland joined euro. In addition to the interest rate differential, the partially simulated history of the mark-krona exchange rate will affect the simulated Mark-Krona exchange rate. Using the simulated exchange rate between Mark and Krona, and taking the realized exchange between Krona and euro into account from 1999 onwards, we can construct an exchange rate between Mark and the euro.

The simulation model for the export of Finland will consist of the history of Finland's exports, of the partly realized and theoretical exchange rate between euro and Mark, as well as of economic activity in the world economy. In particular, our model depends on the GDP growth rates in the U.S. and in the euro zone. As expected, according to the estimation results of the statistical model behind the simulations, a depreciation of the (simulated) Mark-euro exchange rate and increasing economic activity in the world economy increased the export of Finland, and *vice versa*.

Results and interpretation

Under the above-mentioned assumptions, we simulate the value of Mark from 1999 onwards. Naturally, the approach executed here can be extended in several ways; even more sophisticated econometric methods can be applied, for example, but we have found that the results are quite insensitive to reasonable changes in the simulation model and assumptions behind it.

Figure 5 illustrates the official exchange rate of the Mark of Finland in terms of euro from 1990 to 1998 and the simulated exchange rate from 1999 to 2011. The shaded areas show the recession periods.⁷

⁷ The recession periods are based on the growth rates of the Finnish real GDP and the values of the coincident business cycle index for Finnish economy (see: <http://blogs.helsinki.fi/makrosuhdanne/>).

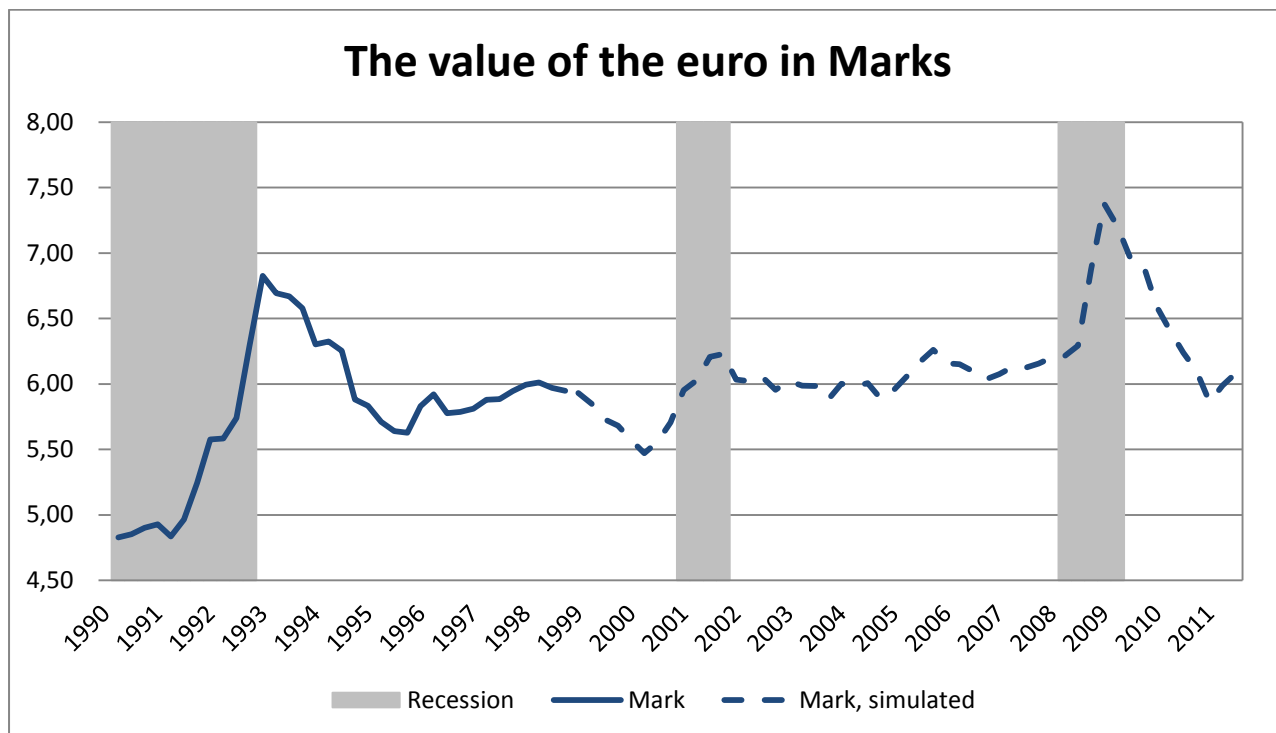


Figure 5. The official exchange rate of Mark in terms of euro from 1990 (Q2) to 1998 (Q4) and the simulated exchange rate from 1999 (Q1) to 2011 (Q3). The shaded areas refer to the recession periods in the economy of Finland. Source: OECD and GnS economics.

Figure 5 gives the approximate value of how many Marks one should pay for one euro; the higher the value in the Figure, the lower the external value of Mark. The conversion rate in 1999 was $1\text{€} = 5.946$ Marks. Figure 5 shows how the value of Mark has fluctuated along with the business cycles, especially during the financial crisis 2008-2009 and the depression period 1991-1993. According to the simulation results, Mark would have appreciated immediately after the shift to euro until the value of $1\text{€} = 5.50$ Marks. On the other hand, the lowest value of Mark would have realized during the financial crisis 2008-2009, more precisely at the beginning of 2009. At this point one euro would have cost around 7.40 Marks, implying that Mark would have depreciated by about 20 percent during the crisis.

Consider now the hypothetical or counter-factual economy of Finland with Mark as its currency from 1990 to 2011. Obviously, the largest changed would have appeared in the export sector which accounts some 40 percent of the GDP of Finland, indicating that this sector is markedly important in Finland. Figure 6 illustrates the actual and simulated paths of the export from 1990 to 2011.

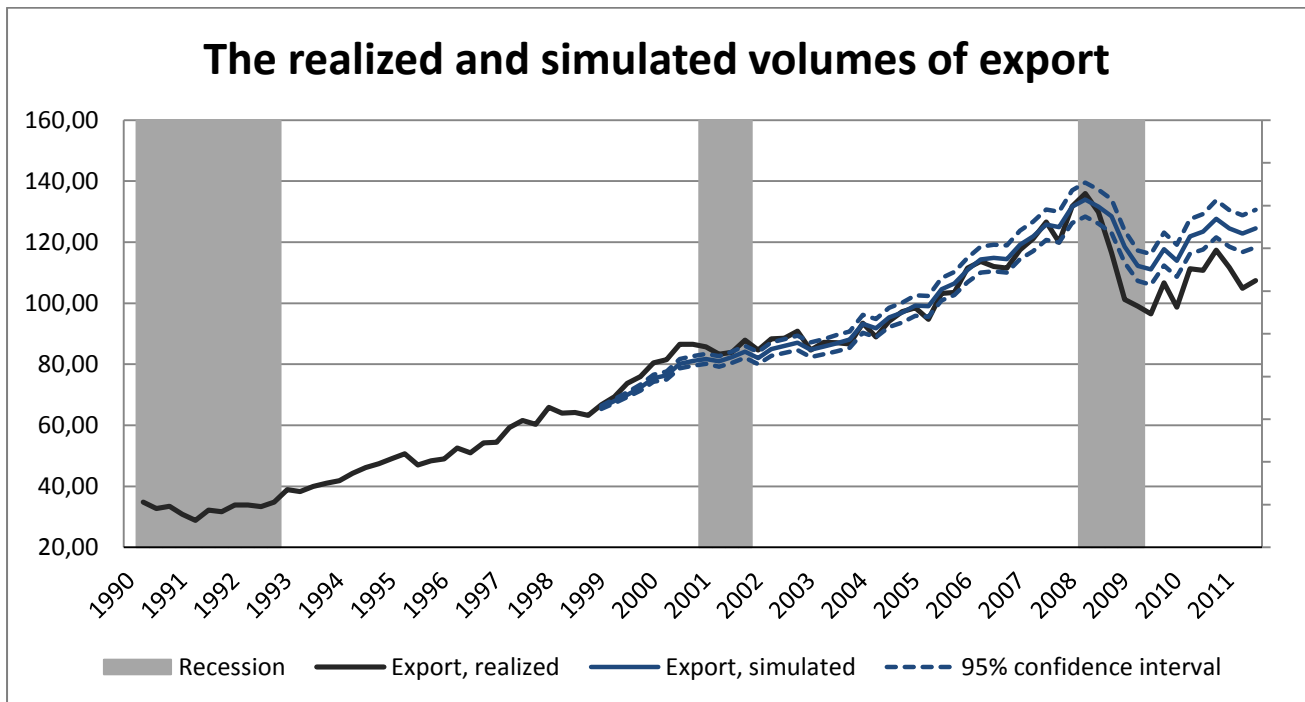


Figure 6. The realized and simulated values of the volume indexes of the export in Finland. Source: OECD and GnS economics.

Figure 6 shows two things. First, according to our simulation, the export in Finland would have been around 6 % smaller during the IT-bubble if Finland had not joined euro. However, this would have been corrected during the next recession when the volume of the realized export decreased a lot. If Finland had not been a member of the euro zone, its export would have been more stable already during the recession in 2001 and even a much larger difference in export would have occurred during the financial crisis 2008-2009. The hypothetical Mark would have experienced a considerable depreciation during this crisis and, as a consequence, the export sector would have performed better. The current values of this sector were some 15 % larger than what now is realized actually. Therefore, in terms of the export, by keeping Mark Finland would have experienced a faster recovery from the financial crisis.

Consider then the counter-factual comparison between Finland and Sweden. If we just compare the realized growth rates between these countries, no big differences can be discovered. The realized growth rates of the real GDP per capita in Finland and Sweden are depicted in Figure 7. Despite that there is no difference between Finland and Sweden, it appears that in some other countries the GDP growth rates have been lower during the existence of euro area than before it (Lombard 2012).

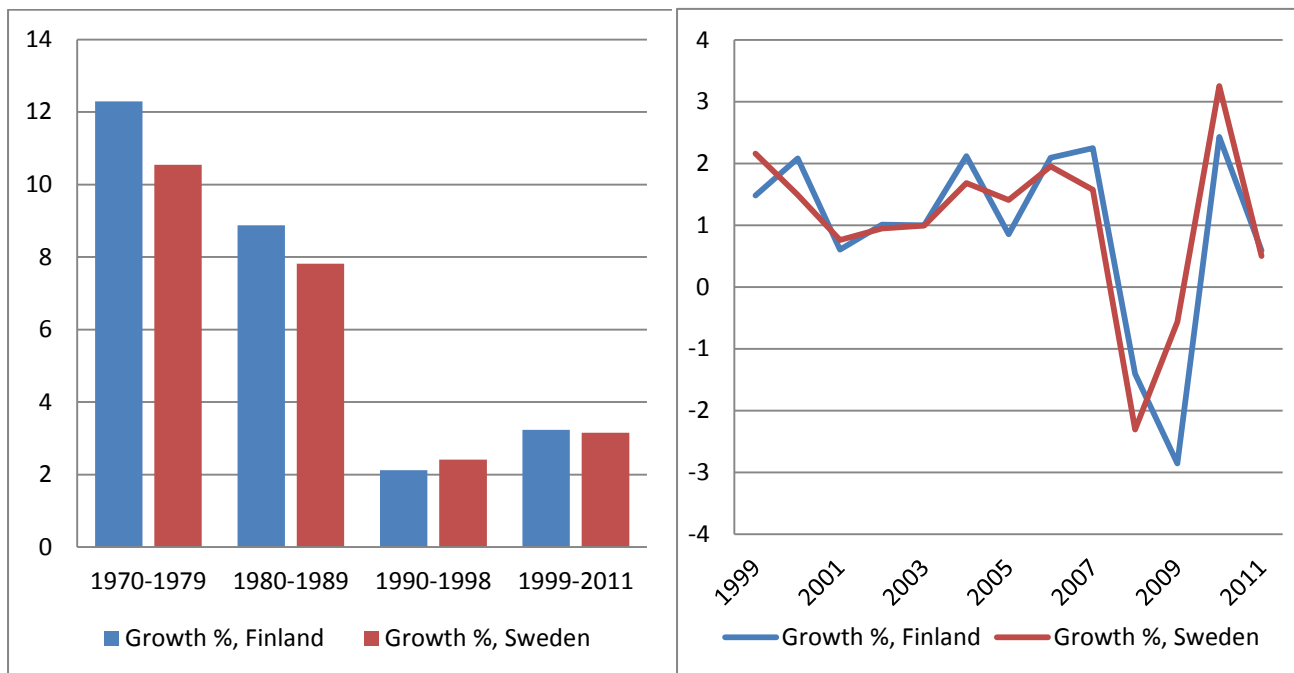


Figure 7. The average and annual growth rates of the GDP per capita in Finland and in Sweden. Source: AMECO.

By comparing the trend of the volume index of export and the growth rates in Figures 6 and 7, it is likely that the hypothetical economy of Finland would have grown faster from 2009 onwards. This argument can also be based on the fact that the economic recovery has been faster in Sweden than in Finland after the crisis of 2008. In any case, except for the period of the financial crisis, the realized growth rates of the GDP have been markedly equal in Finland and Sweden.

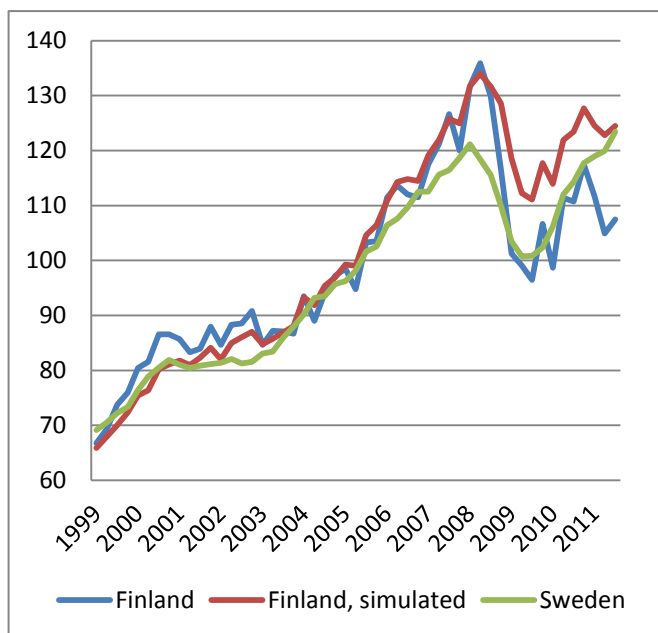


Figure 8. The volume index of exports for Finland and Sweden 1999 – 2011. Source: OECD and GnS economics.

The explanation for the faster recovery of Sweden can be found in the trends in the export sectors. Figure 8 illustrates the realized volume index of the export in Sweden and Finland together with the simulated volume indexes in Finland from 1999 Q1 to 2011 Q3.

It turns out that the export of Sweden has recovered from the financial crisis considerably faster than the export sector in Finland. Sweden has already surpassed its pre-crisis level which is not the case in Finland. The drop in the export has been much larger in Finland. At the end of 2011, the Finnish export was still some 25 % below the pre-crisis level. According to our simulations, If Finland had stayed in her own currency, her exports would have been only some 9 % below the peak in the beginning of 2008. In other words, it seems that the depreciation of the hypothetical

Mark would have helped the export to recover from the crisis even though the level of the export would have been below the level before the crisis.

Which potential factors, other than the different currency in Finland and Sweden, would explain the realized difference in the exports between these countries? According to our simulations, the value of Mark would already have returned to its pre-crisis levels (see Figure 5). Thus, one wonders whether the currency is the only factor contributing to the realized decrease of the export in Finland. One possible explanation is given in Figure 3 which illustrates the nominal unit labor costs for the manufacturing sector in Finland. This Figure shows that these costs are some 12 % higher in Finland than in Sweden. The situation becomes clearer when the average unit labor costs in all sectors are compared. Figure 9 illustrates the overall nominal unit labor costs of production in selected EU countries.⁸ By using this, one can compare the differences in the production costs between countries when the interest rates and production technology are the same between countries.⁹ Although this assumption is quite restrictive, it is still likely to fit rather well to Sweden and Finland, as the structure of their economies and social policies are very similar.

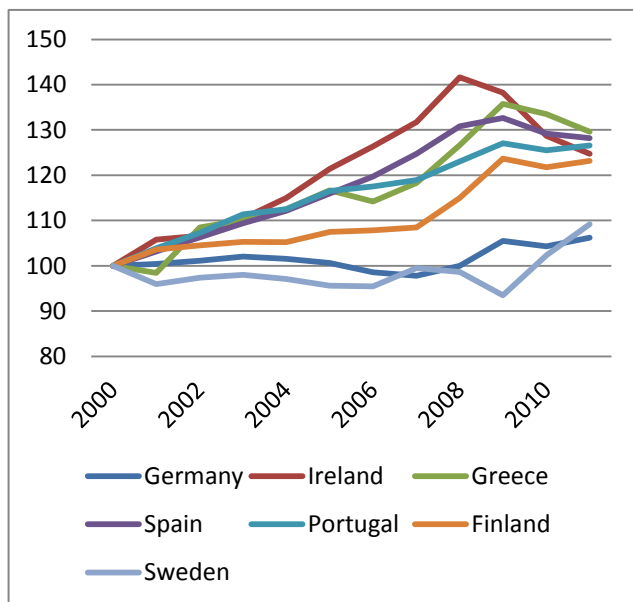


Figure 9. Nominal unit labor costs in the whole economy.
Source: AMECO.

The trends in Figure 9 show that the production costs in Finland are currently some 20 % higher than in Sweden and in Germany. The fall in the productivity in Finland was also pointed out by professor Mika Maliranta (2011) last autumn. Our analysis thus supports his findings. Our analysis indicates that the financial crisis caused a negative shift in the volume of the export in Finland. Finland seems to have lost her competitiveness during a longer period of time, but the export has responded only after the financial crisis. Thus, the loss in productivity has also contributed to the slow recovery of the export in Finland. It should be emphasized, however, that Finland has a notorious history solving its competitiveness problems by depreciating its (fixed) exchange rate which, of course, is not possible under the euro zone.

Our simulation model thus implies that not even own currency had completely prevented the decrease in the overall export in Finland. It also indicates that the decrease in productivity could not have been completely met with changes in the exchange rate.¹⁰ Exports to the euro area tell a similar story. Figure 10 illustrates the balance of the payments of Finland with respect to the rest of the euro zone. It seems that the

⁸ This is a division of labor unit costs divided by the real GDP per worker.

⁹ The unit production costs of a firm, under simplified assumptions, can be presented as: $UC = 1/A \times w^\alpha r^{1-\alpha}$, where A is production technology, r is the interest rate, w is wages, and $0 < \alpha < 1$ is the share of worker income (and $1 - \alpha$ is the share of capital income). This shows that if the production technology and interest rates are the same between countries, wages fully determine the unit production costs.

¹⁰ It is thus also possible that the differences in the productivity have affected the exchange rate between Krona and Mark in a way which our simulation model could not capture. However, the history of the exchange rate shows that differences in productivity between Finland and Sweden have had only a marginal effect on the exchange rate. Therefore, the results of our simulation can be considered robust, at least in this respect.

ratio of the exports to imports has followed a falling trend since 2002, which implies that the productivity of Finland has decreased, indeed.

Thus, what can we say about the “euro journey” of Finland on the basis of this analysis? As mentioned above, the share of exports from the GDP has been almost 40% for some two decades. A change in export thus has a major effect on economic growth in Finland. Unfortunately, export has declined rapidly since the financial crisis of 2008, and has not returned to its pre-crisis levels. According to our simulations, the volume of export would be some 15 % higher with own currency than what is now the case with euro. Our results show also that the value of the hypothetical Mark would have depreciated heavily during the financial crisis, which would have helped the export to recover. Thus, Finland would have benefitted from having its own currency during the crisis, and the economy of Finland would have recovered faster from the recession. Still, own currency could not have completely covered the decrease in the export of Finland caused by a decrease in its productivity. Finland seems to have lost her competitiveness during the period she has been a member of the euro zone but, as Maliranta (2011) states, the biggest fall in the productivity happened immediately after the crisis of 2008 - 2009.

To summarize, according to our simulations, Finland would have benefitted from having its own currency, but only during the recession of 2008-2009. Euro has also helped the export sector of Finland during the IT-boom of 2000-2001. This shows that the conversion rate of Mark to euro set in 1999 was quite correct for Finland. Our simulation also shows that the value of Mark would have returned close to par with the conversion rate of 5.469 at the end of 2011.¹¹ Thus, having an own freely floating currency would have provided only a temporary relief although it would have helped the economy the recover faster. This naturally leads to a question, should Finland part ways with the euro zone. The feasibility or such an extreme action for Finland is discussed in the next Section.

Should Finland leave the euro?

To summarize, our simulations indicate that even though the current value of Mark would be approximately the same as the conversion rate, originally used to tie Mark to euro, the value of the exports would have recovered faster completely without this tie. From this, someone could conclude that it would be beneficial for Finland to return to its own currency. However, one should note that our analysis depends on the as-

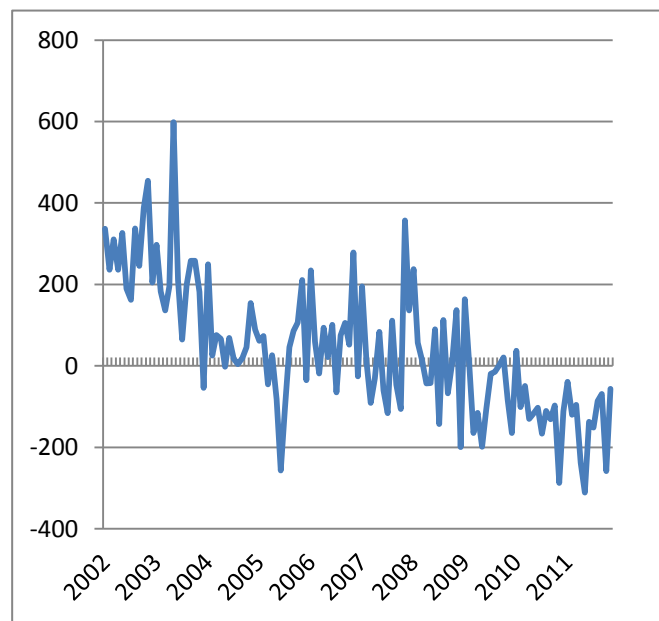


Figure 10. The balance of payment of Finland compared with 11 countries of the euro zone. Source: Customs

¹¹ It should be noted that it is possible that the diminished productivity in Finland and the fall in exports that would naturally have ensued, could have decreased the value of Mark with respect to euro more than our simulation tells us. However, it is quite impossible to know would the value of Mark responded to this. In retrospect, the value of Krona is currently only some percent higher than it was before the crisis.

sumption that Finland would never have joined euro. Should Finland part ways with euro now, both the euro zone and the economy of Finland would be affected in ways nearly impossible to model and forecast. It is thus imperative to note that our analysis cannot be used to assess the value of Finland's exports or the value of her currency in the case of current retreat. Nevertheless, we can point out several key issues that are likely to happen in the economy of Finland if she decides to leave the euro.

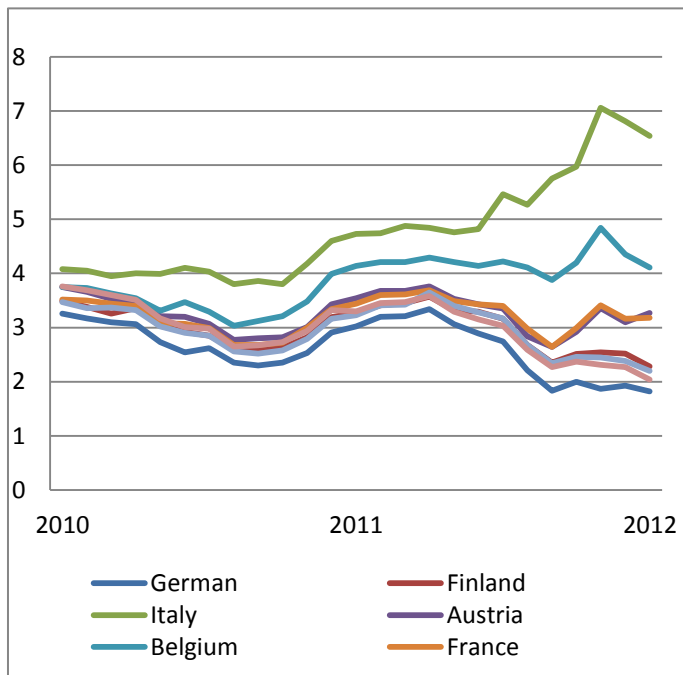


Figure 11. The yields of 10 year bonds of selected euro area countries Source: ECB.

First of all, it is important to note that Finland has one of the best fiscal positions in the euro zone. Finland still has the triple-A credit rating from all major rating agencies and its borrowing costs still stay close to those of Germany. Figure 11 presents the yields of the 10 year bonds of some euro zone countries.

It is likely that the exit of Finland from the euro zone would weaken this zone as the current economic weight of Finland is considerable bigger than its actual economic size. Thus, the retreat of Finland would almost certainly decrease the value of the euro which would naturally cause a appreciation of Mark against euro. This would cause the export of Finland to the euro zone to fall. Considering the other direct costs of exiting, including printing new Marks (Finland has got rid of all old bills and coins) and converting all euro-nominated con-

tracts and assets to a new currency, the exit of Finland would become costly, at least in the short run. At least the short term (1-2 year) economic growth would diminish if Finland exits euro.

By leaving euro, Finland would also leave the funding of the European Stability Mechanism, ESM, starting in July this year. This would lower the credibility of this mechanism making it hard for the facility to borrow from the markets. This would lead to increasing financial problems in the periphery, which would cause the value of euro to fall against the Mark of Finland. Growing problems and limited options to solve them would diminish the economic growth within the remaining euro zone. Together with appreciation of Mark this would cause the exports of Finland to the euro zone to fall further.

It is also possible that, by exiting, Finland would become a safe haven for non-European money, as is the case with Denmark and Sweden. This would make it harder for the Bank of Finland to adjust the exchange rate of Mark by applying open market operations. In this case, Mark would appreciate against the euro, which would hurt the exports of Finland.

Figure 12 shows that the yields of the long-term bonds in Germany are recently higher than in Sweden and Denmark, indicating that Denmark and Sweden are seen as safe havens by investors.¹² What is worrying for

¹² Denmark and Sweden have smaller government debt than Finland or Germany, but this was case already at the beginning of 2010. It is thus likely that drop in the of the bonds of Denmark and Sweden results from the fact that they are

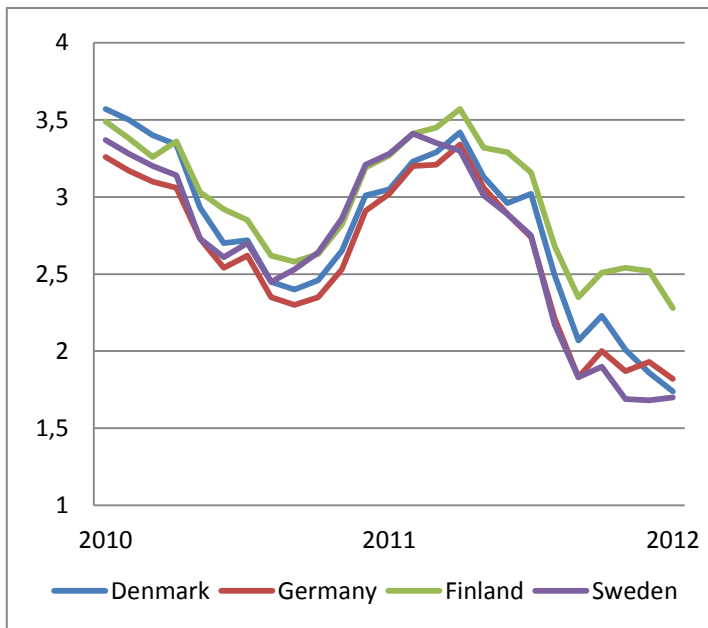


Figure 12. The yields of the 10 year bonds of Denmark, Finland, Germany and Sweden, 2010-2012. Source: ECB.

Finland is that the yield spread with Denmark and Sweden has grown at the end of 2011. It is likely that this large spread reflects the different responsibilities to the European Stability Mechanism in Nordic countries.

A retreat of Finland or some other countries with triple-A credit rating could lead to the retreats of other countries as well. As mentioned above, by leaving the euro zone Finland would also leave the rescue facilities, which could prompt a reaction in other countries currently holding the tab. The special report by Lombard Street Research suggests that it could be preferably for the Netherlands to exit the euro due to costs that euro zone currently bears upon its members (Lombard 2012). The exit of Fin-

land could thus induce the Netherlands or Belgium to leave, which would lead to a full breakdown of the euro zone. Peripheral countries would default and, as the Target2 and other financial systems of the euro zone would need to be unraveled, the costs would become high. This would ensue to a banking crisis, leading to a depression in the euro zone. Finland (and the rest of the world for that matter) could not escape the economic costs of this depression.

Further, it is hard to know whether Finland would have been as successful as Sweden in its monetary policy. Just before Finland became a member it had faced several depreciations of its exchange rate. By keeping its own currency, Finland would have risk its credible monetary policy which could have led to currency speculation. This would have led to increased volatility at its exchange rate, raising the overall risk in its export industry.

It is thus likely that the exit of Finland from the euro zone would, at its best, lead to diminished economic growth. At the worst, the exit of Finland could prompt a breakup of the euro zone, which would increase the costs of an exit exponentially. Therefore, even though the euro membership has probably dampened the economic recovery of Finland, a current exit would incur higher costs than those of a continued membership. Economic crises are often made worse by swift and short-sighted decisions and the exit of Finland would be just that. However, this does not mean that it would be beneficial to stay a member at any cost. If, for example, several countries leave the euro, the membership of Finland is to be reconsidered.

There are, however, some scenarios under which it would be economically feasible for Finland to leave euro. One of these scenarios would be that euro would be reformed around its "core". This means that only the economically strong countries (Germany, France, Austria, the Netherlands, Belgium and Luxemburg) were members of the currency union. The value of such euro would increase heftily, especially if it were founded

outside the Eurozone but inside the EU, meaning that they are not burdened by risks currently associated with the euro membership.

during the current crisis. This would hurt the export sector of Finland seriously. The costs of being a member of this core-euro could soon become unbearable. The economy of Finland is burdened with ageing and low competitiveness which, together with an overvalued currency, would take Finland to serious economic problems. In the worst case, Finland would become the Greece of such a core-euro. A cautionary sign of this can be seen in the current drop of our export to these countries. Figure 13 gives the trade balance of Finland with respect to Germany, France, Austria, the Netherlands, Belgium and Luxembourg.

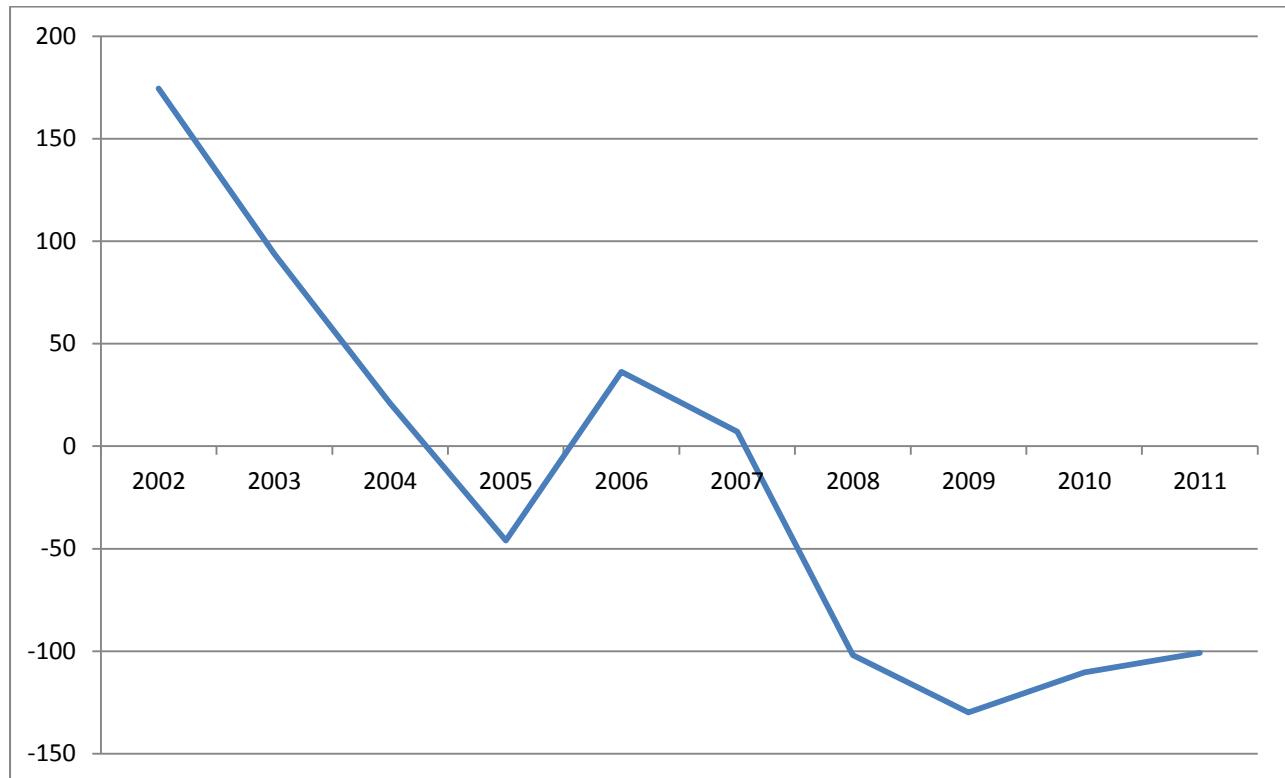


Figure 13. The trade balance of Finland with respect to the countries of the core-euro from January 2002 to November 2011. Source: Customs of Finland.

Figure 13 shows the dramatic drop in our trade balance to the countries in question, this drop being due to a similar drop in our competitiveness. Thus, as a member of the core-euro, Finland were likely to face a long-lasting deficit in the balance of payments demanding a considerable cut in wages, i.e. an internal devaluation. In such a case, Finland would face just two choices: it could either take the risk of returning to its own currency or it could accept the internal devaluation and the associated decrease in the living standards in Finland. Furthermore, already the exit of the weakest countries, and the associated increase in the external value of euro, makes it less beneficial for Finland to stay in the euro zone.

The break-up of the euro zone to two or more currency unions has also been proposed as solution for the European debt crisis (see for example Henkel 2011). The reason behind this proposition is that EU includes several sub-areas that are likely to be more optimal than the current euro zone. Although there are several theories dealing with the optimal currency area, OCA, this optimality is generally dictated according to the following four criteria (Mundell and Fleming 1961, Frankell and Rose 1998, Feldstein 2011):

- 1) Labor force should move freely within the currency area, implying that work permits, visas, and language or cultural differences should not impede the labor force mobility between the countries.

- 2) The countries in the currency area should have close trade ties.
- 3) The business cycles should affect the countries in the same way.
- 4) Currency area should have some mechanisms to redistribute risks and incomes between the countries.

The more of these criteria currency satisfies, the more optimal the currency area is. Unfortunately, in strict terms, the current euro zone does not satisfy any of four conditions above. Thus, in the eyes of economics, the current problems in the euro zone are not surprising. As mentioned above, euro area includes, however, several combinations of countries that would satisfy one or several of the criteria. Germany and the Netherlands, for example, have got quite similar monetary policies for several decades. The majority of the people in Germany, the Netherlands, Belgium, Luxemburg, Switzerland, and Austria speak the same language and these countries also have markedly close trade ties. In the Nordic countries, business cycles are relatively identical, labor force moves quite easily and countries have tight trade relations as well. It is thus likely that currency areas consisting of, say, the above mentioned countries would probably work better than the current euro zone.

Conclusions

According to our analysis, euro area membership has not led to major economic benefits or costs for Finland. The membership of the euro zone helped the economy of Finland during the IT-boom at the beginning of the 2000s by keeping the currency lower than what it would have been if Finland had her own currency. According to our simulations, Mark of Finland would have appreciated by some 6 percent that would have caused the export of Finland to be several percentage points lower than what it was under the euro regime. During the recession that followed the financial crisis of 2008, Mark would have depreciated by some 20 percent even though it would then have appreciated close to its original conversion rate. The depreciation of Mark during the crisis would have increased the export of Finland such that at the end of 2011 the export would have been some 15 % higher than currently. Although the simulation model here may lead one to conclude that it could be beneficial for Finland to leave the euro zone, our analysis on the possible exit of Finland shows that this is not the case. If Finland exits now, it would lead to a fall in the export that, combined with all the associated costs, would lead to diminished economic growth at least in the short run. However, if the composition of the euro zone changes, Finland should reassess her position.

It is quite evident that for Finland the euro membership has been a political choice as well. As Angela Merkel stated recently, euro has been a political project for Europe as a whole. It is rather obvious that euro has connected the countries on the euro zone in a way that would not have been possible in any other way. Nevertheless, any monetary union is always an economic union as well. The political decisions of the individual countries affect the economy of the entire euro zone in a more straightforward manner since there is no exchange rate to even out the “shocks” potentially caused by such decisions. The fundamental problem of the euro zone is that the most important criterion of an optimal currency area, namely the free mobility of the labor force is not satisfied (Feldstein 2011). In the United States, for example, labor force travels easily from one state to another seeking employment but this mechanism does not work properly on the euro zone due to its notable linguistic and cultural differences. This leads to asymmetry of economic trends within the euro zone, also due to the heterogeneity of the productivity shocks and business cycles across countries. On the euro zone, diminishing productivity leads to falling wages and decreasing living standards in-

stead of migration. If this problem were recognized at the beginning of the euro zone, the problem could have been mitigated by decreasing the high inflation rates in some countries. This would have meant that the benchmark interest rate of the ECB would have been higher, which would have diminished economic growth rates but also tamed inflation.

Compared with many other countries on the euro zone, the fiscal position of Finland is still good. However, this position is threatened by ageing population and structural budget deficits. In addition, like all solvent countries of the euro zone, the fiscal position of Finland is weakened by the guarantees she has made to European financial stability facility, EFSF. It is not obvious that it is beneficial for Finland to provide any additional guarantees for these facilities (including the European stability mechanism, ESM). This is because the method used by EFSF to solve the crises has not been efficient and in some cases the crises have become more serious.¹³ The main purpose of EFSF was to stop the contagion, i.e. situation where speculative attacks reach the bond markets of the other countries. It is quite evident that EFSF failed that goal. Austerity measures have also pushed countries that were insolvent to begin with deeper into abyss. Both EFSF and ESM violate the Maastricht Treaty, which bans bailouts. There are at least two reasons for banning EU scale bailouts in Maastricht Treaty. First, the no bailout-clause was meant to enforce the EU-countries to maintain their fiscal stability. Secondly, the strategy to save countries from debt with new debt is usually not feasible.

Several economists argued more than a year ago that the debt of the countries with excessive debt burdens needs to be restructured. For Greece, for example, that is the only way to achieve economic growth. This claim has been supported by economic research. A recent study by Yeyati and Panizza (2011) finds that after default, economic growth recovers usually after only two quarters. Results concerning growth performance under a too high debt burden are equally dooming. For example, studies by Caner *et al.* (2010), Reinhart and Rogoff (2010) and Checherita and Rother (2010) all find that growth starts to slow down, when the debt to GDP ratio exceeds 80- 90%.¹⁴ Considering these results, Greece will need another restructuring of her remaining debt to restart its growth again. For Greece, the sustainable and growth enhancing level of debt to GDP is likely to be around 60 percent.

Why has the EU then avoided the restructuring of the debt of the insolvent euro zone countries? The fact is that default is a natural way to make the economy of a country more competitive since it does not leave any other options than to stabilize the budget and cut wages. As mentioned above, the leaders of the euro zone have been afraid that insolvency of one country would lead to speculative attacks against the other countries with unfavorable debt to GDP ratio. As we now know, this has happened regardless of the rescue packages. From history, we also know that countries within a currency union have become insolvent without causing any catastrophic effects on the rest of the countries.

Thomas Sargent (2011) reminded in his Nobel prize lecture that several states of the United States have defaulted in the past. From 1841 to 1843, for example, eight states and the territory of Florida defaulted, but none of them were expelled from the currency area (Walsh 2011). After default several states in addition to the mentioned nine, passed laws banning large deficits. In spite the default, all defaulted states were unable

¹³ Only when country is facing a liquidity crisis meaning that country is facing a *temporary* shortage of funds, it may be viable option to provide more loans to a country.

¹⁴ According the Caner *et al.* (2010), this would happen already when the debt to GDP ratio exceeds 77 percent. Reinhart and Rogoff (2010) find that the growth slowing ratio is 90 percent, and Checherita and Rother find this ratio to be between 70 and 100 percent.

to borrow from financial markets only for a short period. Nevertheless, there is one crucial difference with regard to the current euro zone: in the 1840s, there were no central banks. Currently, almost all countries have central banks with the main responsibility to warrant the liquidity of the banking system. In the euro zone, the banks can obtain over-night loans from the ECB without collateral and they can also obtain loans with longer maturity against predetermined collateral. Many banks on the euro zone use government bonds as collateral for their loans but the ECB cannot accept the bonds of a defaulted country.¹⁵ Therefore, the leaders of the euro zone are afraid that, if a country defaults, its banks would be cut off from the ECB funding.¹⁶ In this case, country faces only two options. It can let its banking sector to collapse or it can start printing its own currency and use it to provide liquidity for its banks. As the consequences of the collapse of the banking sector would be catastrophic, a country is forced to issue its own currency to save its financial sector. At the same time, the country faces a huge flee of capital and assets to abroad. To stop this, the country would need to issue strict bans for capital and assets transfers outside its borders. As this would violate the Maastricht Treaty, the country would face a threat of separation from the EU. Therefore, contagion and separation from the euro zone would be the biggest costs of default within the euro zone.

However, Greece has just shown that countries on the euro zone can restructure their debts without causing a disaster. The ECB no longer accepts its bonds as collateral, but the central bank of Greece still does so. Some observers say that the Greek banks have already started to use other bonds, like municipal bonds, as collateral for the ECB loans (Varoufakis 2012). The only problem with the restructuring of the debt of Greece was that it did not include the debt that Greece owes to EFSF and to other countries on the euro zone, which will be necessary to get the economy growing again. But the point is that countries can restructure its debt and still be a member of the euro zone. In addition, the ECB can always stop the crisis from spreading by using its ability to print money.¹⁷ Thus, there are good options on the current path of bailout packages. Therefore, it would be the interest of Finland to pursue solutions that are based on the restructuring of the debt of the weakest countries.

All in all, euro is currently facing the worst crisis during its history. Citizens and corporations have embraced euro and the euro area has created stability within the EU, until 2008 at least. Europe needs a currency area, and thus work has to be done to maintain it. Nevertheless, there is a point after which the costs of the euro zone membership outstrip its benefits. Our analysis revealed that the membership has slowed the recovery of the export of Finland from the financial crisis of 2008. For Finland, it is crucial to consider whether this was just onetime effect, or will the recessions be made worse in the future if Finland stays a part of the euro zone? The situation where only the strong countries of Europe, e.g. Austria, Belgium, France, Germany, Luxemburg, and the Netherlands would constitute the euro zone, is also a potential threat for Finland. If Finland were a part of such a “core-euro”, Finland would run a risk of becoming the most vulnerable economy of the area. If the development in the euro area leads to the constitution of such a core-euro, Finland should reconsider her position. In this case, it could be beneficial for Finland to form a currency area with the Nordic countries, or to return to her own currency.

¹⁵ International Swaps and Derivatives Association, ISDA, defines when a country has defaulted.

¹⁶ Unfortunately, this problem has been made worse by the LTRO program. This is because many banks have used the cheap loans with long maturity to buy sovereign bonds with high yields, i.e. the bonds of the risky countries.

¹⁷ The ECB can, for example, announce that it will set a upper limit for the yields of bonds of certain governments meaning that it will buy bonds from the secondary market if yields rise above this limit.

References

- Caner, Mehmet, Grennes, Thomas and Koehler-Geib, Fritz (2010). Finding the tipping point – when sovereign debt turns bad. World Bank Policy Research working paper no. 5391.
- Checherita, Christina and Rother, Philipp (2010). The impact of high and growing government debt on economic growth. European Central Bank working paper no. 1237.
- Evans-Pritchard, Ambrose (2010). The horrible truth starts to dawn on Europe's leaders. The Telegraph, 16th of November.
- Feldstein, Martin (2011). The euro and European economic conditions. NBER:n discussion paper no. 17617.
- Feldstein, Martin (1992). The case against EMU. The Economists, 13th of June.
- Frankell, Jeffrey and Rose Andrew (1998). The endogeneity of the optimum currency area criteria. *Economic Journal*, 108(449): 1009-1025.
- Henkel, Hans-Olaf (2011). A sceptic's solution - a breakaway currency. Financial Times, 29th of August.
- IIF, Institute of International Finance (2012). Implications of disorderly Greek default and euro exit. Staff note.
- Korkman, Sixten (2011). EMU eksyksissä. EVA analyysi nro. 17.
- Korkman, Sixten (2009). Suomi, Ruotsi and EMU. Suhdanne 2009:1. ETLA.
- Lombard Street Research (2012). The Netherlands and the Euro. Special report.
- Maliranta, Mika (2011). Suuri kuoppa – Suomen hyvät työllisyysluvut kätkevän tuottavuuden romahduksen. EVA analyysi nro. 18.
- Reinhart, Carmen and Rogoff, Kenneth (2010). Growth in a time of debt. *American Economic Review: Papers & Proceedings*, 100(May 2010): 573-578.
- Robert Mundell and Marcus Fleming (1961). A theory of optimal currency areas. *American Economic Review*, 51(4): 657-665.
- Sargent, Thomas (2011). Nobel prize lecture.
<http://www.nobelprize.org/mediaplayer/index.php?id=1741&view=1>.
- Varoufakis, Yanis (2012). Greece default does NOT equal Greece exit.
<http://yanisvaroufakis.eu/2012/02/18/greek-default-does-not-equal-greek-exit/>.
- Walsh, Sebastian (2011). A history of debt defaults: United States 1840s. Financial News, 29th of July.
- Yeyati, Eduardo and Panizza, Ugo (2011). The elusive costs of sovereign defaults. *Journal of Development Economics*, 94(1): 95-105.

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