



THE FUTURE OF THE EURO: THE OPTIONS FOR FINLAND

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Introduction

The European Monetary Union (EMU) was a political project from the outset. The uncertainty factors involved were disregarded, even though many economists, especially in the United States, warned of the risks involved. Unfortunately, their fears have become a reality. The EuroThinkTank of Finland, a working group representing consisting of economists, experienced professionals in the financial sector and a statistician, undertook to analyse the underlying reasons for the economic and political crisis afflicting the eurozone and to assess the future of the euro. The group specially focused on the options available to Finland, a small euro member. The think-tank members were united by a sense of disappointment with the economic development of the eurozone, the rhetoric nature of the policy on the euro and the lack of diversity in the argumentation related to the assessment of its performance.

The report raised the following questions:

- (i) Why is the eurozone in crisis? What is the magnitude of the welfare losses the crisis has led to?
- (ii) Do the political union, banking union and fiscal union represent solutions that promote democracy, economic efficiency and the general welfare and security of the eurozone's citizens?
- (iii) Is a full-blown federation a better option than the current trend towards a weak federal state, or are we heading for the re-adoption of national currencies?
- (iv) What are the options available for Finland?

¹ University of Helsinki. This article is based on a book published on 7 May 2014 by the Libera Foundation. To produce the book, the Finnish EuroThinkTank worked in the facilities of the University of Helsinki and its members were Vesa Kanninen (Chairman), Jukka Ala-Peijari, Elina Berghäll, Markus Kantor, Heikki Koskenkylä, Pia Koskenoja, Elina Lepomäki, Tuomas Malinen, Ilkka Mellin, Sami Miettinen, Peter Nyberg and Stefan Törnqvist.

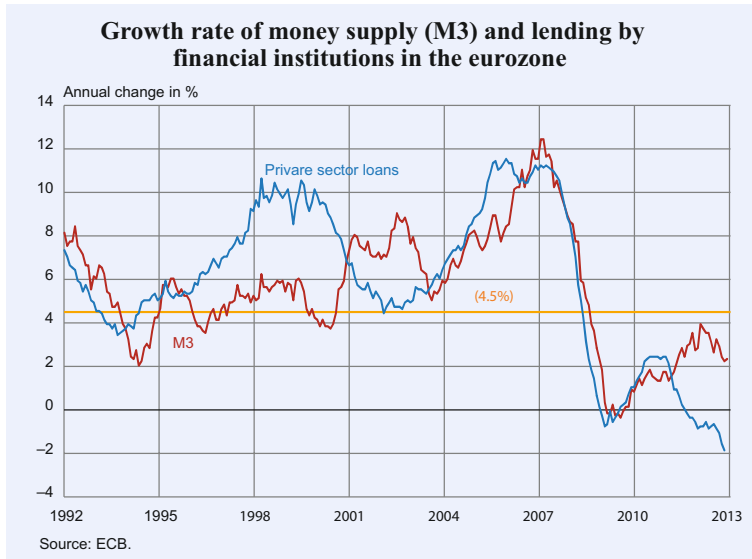
The think tank held that the foreseen political union including the banking union and fiscal union will push the eurozone towards a sort of practical federal state, referred to as the 'weak federation'. It has also transpired that conflicts of interest between individual member states cannot be overlooked in the assessment of the future evolution of the eurozone. States facing a sovereign debt crisis demand that their problems be resolved through solidarity, while member states that have put in a better performance in looking after their public finances object to joint liability.

The report conveyed a message to Finland's political decision makers: Finland has a range of options, including the current 'driftwood option', a unilateral return to the Maastricht Treaty (Maastricht 2.0) with an option to abstain from a further step towards integration, and Fixit, an immediate return to the national currency.

Why the euro crisis?

The reasons behind the euro crisis have been extensively discussed by economists. The book authored by the EuroThinkTank of Finland reviewed those reasons, including labour market mechanisms and the resulting current account problems. Moreover, a lot of attention was devoted to the financial issues, i.e. excess liquidity created in the eurozone. The purpose of the monetary union was to integrate the eurozone's financial systems, improve their efficiency and to create favourable conditions for risk diversification. This did not materialise. True enough, progress was made with integration, but cross-border financing contributed to debt bubbles. As banks with distorted balance sheets became increasingly dependent on short-term borrowing instead of traditional deposits, they also became more exposed to disruptions. Most importantly, the debt markets were fuelled by cheap money, for which favourable conditions were created by the key central banks, the ECB included. During the euro's lifetime, the financing base of the banking sector crumbled and its size relative to the production capacity of the eurozone grew out of proportion. Large banks became oversized banks.

Figure 1



The book took the view that to understand the creation of excess liquidity, a closer examination of the ECB's monetary policy is required. In many cases lax monetary policy often underlies credit expansion. The crisis originating in the United States in 2008 can be traced back to lax monetary policy coupled with failed housing market policy and, in particular, shadow banking operations. There were also regulatory failures in the supervision of the markets and financial institutions. The ECB's monetary policy in the 2000s, the years leading up to the euro crisis, was also lax. According to the chart below, the M3 money supply in the eurozone grew by 106 percent during 2001–2008, while the average annual growth rate should have remained at 4.5 percent according to the first pillar of the Maastricht Treaty.

In the 1990s, the monetary authorities on both sides of the Atlantic were perhaps thinking that the stance of monetary policy with low interest rates is sound enough as the rate of inflation is under control. What this view fails to take into account is the fact that the rate of inflation was down because of the globalization process based on low-cost production in the developing countries. Underlying the easy accumulation of debt was the evolution of the European bond market. Central to these developments were the arrangements made by Eurobanks

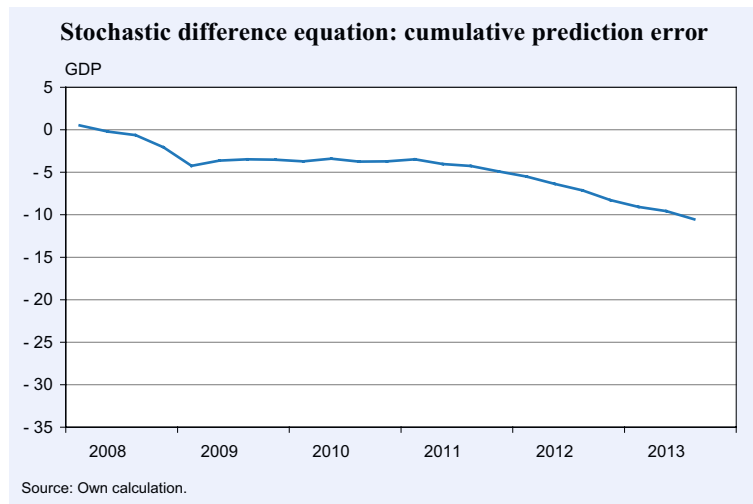
and the ECB, which gave added impetus to the growth of debt.

Several handicaps have been identified in the development of the EMU. The most fundamental one, however, is of a political nature. The leaders in the eurozone did not show strict commitment to the jointly designed rules of economic policies. The economic relations between the US Federal Government and the states, on the contrary, have been governed by a strict no-bailout policy since 1840. The Fed does not hold bonds issued by the states in its portfolio.

The welfare loss of the euro countries

An argument can be put forward that the eurozone would have tumbled into difficulties even without the shock originating in the United States. The book provides a statistical assessment of the potential size of the cumulative welfare loss incurred by the euro members. It is based on the evolution of the eurozone's GDP relative to the recovery of a reference economy, the United States. While the statistical link between real growth in GDP in the United States and the EMU was extremely strong up until the end of 2007, it has broken since then. The assessment was made using several statistical models based on one-step forecasts. In a sense, the cumulative welfare loss measures the distance by which actual GDP has fallen behind potential GDP. The idea is that the US

Figure 2



GDP serves as a surrogate variable for a larger set of phenomena affecting GDP in the eurozone.²

The following models were used:³

- Stochastic difference equation: the actual evolution of the eurozone's GDP was explained by its built-in delay structure and the actual evolution of the US GDP.
- VAR model: actual real GDPs of the eurozone and the United States in inter-dependency.
- VARX model: eurozone's and Finland's GDP were explained by US GDP in addition to the built-in delay structures.

The results are summarised as

- (i) Using the stochastic difference equation, the difference between the prediction yielded and the actual GDP produced a cumulative prediction error of -10.5 in the prediction period after 2007 IV. This shows how much the volume index of the eurozone GDP falls short of what was predicted by the model by 2013 III.
- (ii) In the VAR model, the cumulative prediction error yielded by the VAR model was -11.4 .
- (iii) In the VARX model, the prediction error was -9.8 .

The claim that poorer performance in crisis management as compared to the United States is due to the eurozone itself – its inherent structural flaws and/or policies – is plausible. This view is supported by several observations:

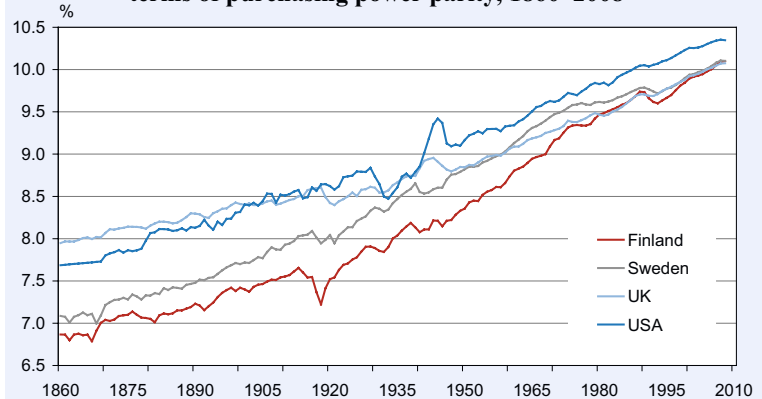
- (i) Before the US-induced economic shock, developments in the eurozone followed the economic development of the United States quite closely.

² The models were estimated using observations from the period 1995 I–2007 IV. All the time series used in the models consisted of seasonally adjusted quarterly GDP time series (in levels). After estimation, the models were used to generate a statistical prediction showing how GDP would have been expected to develop if the laws operating prior to the euro crisis had applied during the period 2008 I–2013 III covered by the prediction. The predictions were single-step predictions formed by inserting the actual values of the GDP variable to be predicted in the estimated model equation in an effort to ensure that the prediction is as sound as possible in terms of its statistical properties.

³ The models were subjected to diagnostic validation and the adequacy of the model with respect to the remainder term is determined in the 'Hendryan' (Hendry 1959) spirit of statistical deduction.

Figure 3

GDP per capita growth rates in UK, USA, Sweden and Finland in terms of purchasing power parity, 1860–2008



Source: Bolt and van Zandern (2013).

From 1999–2008, the real rate of growth in both regions was 2.3 percent.

- (ii) Although the United States succeeded in getting back on the growth track fairly quickly after the 2008/09 economic crisis, the eurozone has failed to do so.
- (iii) The stagnation in the eurozone is not due to other developments in the global economy. No shocks have been sent to the eurozone by the world economy that can explain the halt of the region's economic growth.

Economic history suggests that even a minor difference in growth rate may, with time, lead to a dramatic cumulative loss. Figure 3 illustrates the real per-capita growth in GDP from 1860–2004 in Britain, the United States, Sweden and Finland. A significant observation is made: by the year 1985, the world's wealthiest nation (Britain) slips to the last place with the lowest income level in this group posting a total per-capita income that is only two-thirds of that of the United States. This dramatic cumulative welfare loss is a result of the difference in the average growth rate between the United States and Britain – a mere 0.4 percentage points per year. The key question in evaluating the crisis facing the monetary union is the effect of the new EMU institutions on economic growth and the wellbeing of citizens.

Plans for an extended integration in the EMU

Germany is emerging as a key player in the long-term evolution of the EU institutions. The body politic in Germany wishes to turn the monetary union into a political union. According to German political think-

ing, supported by all major parties, the political union would consist of a banking union, a fiscal union and an economic union. Through its current account balance, Germany funds other euro members. The estimated cumulative surplus of the current account already exceeds 1,000 billion euros (see de Macedo and Lempinen 2013). Germany also benefits from a weak euro relative to the country's competitiveness. It has been estimated that if Germany had its own currency, its value against the US dollar could be as high as 1.60 whereas the euro-dollar exchange rate now trades at around 1.38 (March 2014).

Is a currency union viable without a political union? There are no examples in world history of successful currency unions between independent states. All successful common currency mechanisms that have been in operation for any longer periods of time have been either federal states or confederacies (Bordo and Jonung 1999). The IMF has, however, suggested that a full-scale implementation of a banking and fiscal union would save the euro and secure stability in the eurozone (see IMF 2013a and 2013b). The ambition to develop the eurozone's economic and monetary union into a fiscal union is expressed in the report 'Towards a Genuine Economic and Monetary Union' published on 5 December 2012. It was signed by the President of the European Council; the Chairman of the European Commission; the President of the Eurogroup; and the President of the ECB.

The objective of the road map is to establish a community-level financial policy based on joint liability in order to manage economic disruptions. It would be based on increasing community-level decision making. It is foreseen to lead to growing coordination of the economic policies of the member states, specifically in taxation and efforts to address unemployment. To strengthen the fiscal capacity of the EMU, plans are in place to introduce a community-level unemployment security system to replace equivalent national schemes. Money to finance the common funding scheme would be raised from national sources. Community resources would be strengthened by issuing community-level bonds. The ultimate goal of the fiscal union is seen in the creation of the European Ministry of Finance.

The roadmap for the fiscal union highlights the short-term stabilisation needs of the monetary union. In a federation, it would be natural for the community to take care of the stability policy. If responsibility for

the monetary policy were to rest with the ECB, evidently the responsibility for financial policy and macro-economic stabilisation would fall on the Commission and the European Parliament (or an equivalent agency to be created for the euro countries). A fiscal union would be tasked with producing public goods (security, social services) and certain private goods (health care, education), to create a social assistance system (unemployment benefits), establish a just income transfer system, and manage the stabilisation policy. Fiscal federalism as an economic architecture should be evaluated in terms of whether it increases economic efficiency. The EuroThinkTank's book reviewed such a plan.

The alternative futures of the EMU

Conflicting interests

The eurozone's growth prospects are so bleak that its welfare losses relative to normal economic development and growth may well persist for a long time to come. From the point of view of the future of the monetary union, what is decisive, however, is what happens to the large euro members. Italy, Spain and France are facing major problems.

The economic crisis in the eurozone has also led to divergence of the member states' interests. Southern members hold that they are entitled to income transfers from northern members. The former advocate Eurobond-based joint liability in financing budget deficits, re-distributing the cost of over-indebtedness, managing the potential support measures required by Eurobanks, and putting in place a joint deposit insurance.

The possible futures

The current state of the eurozone, often referred to as the EMU-2, means a departure from the Maastricht Treaty ('Maastricht 1'). The principles of 'no bailout' and the non-involvement of the ECB in supporting any individual country have ceased to apply. Most likely, the current situation, EMU-2, is just an intermediary phase. It has become evident that the Commission and the ECB will, in accordance with their respective missions, step by step take measures that will willy-nilly steer the development of the Union towards deepening integration and centralised decision-making.

It appears that the entire eurozone has only two stable options that do not involve any internal tensions regarding the further development of the system:

- (i) A strong federation consisting of the 18 euro members.
- (ii) A return to national currencies, meaning the type of EU membership similar to that of Sweden and Poland.

However, each individual country can determine the preferred level of integration for its own part. If this happens, a part of the eurozone may evolve into a federation whose currency is used by a group of member states content with a lower level of integration.

Consequently, the member states have four options:

- (i) Membership of a weak euro federation (like today; most likely just a temporary solution).
- (ii) Membership of a strong euro federation (likely outcome of the planned development of the EMU over the long term).
- (iii) Keeping the euro, but staying outside of any alliances.
- (iv) Adoption of a national currency or exit from the euro.

EMU-2 as a weak federation

Based on EMU-2, the eurozone would evolve into a temporary federation of independent states which would, step by step, be strengthened by new decisions. The banking and the fiscal union may just be enough to restore permanent stability to the finances of the member states and banks. This time around, the member states might actually stick to the agreements made. In case of a new financial crisis, the last resort would again be the ECB's extreme monetary policy measures.⁴ The capacity of the weak federation to generate welfare may be compromised.

Ample evidence shows that regulators repeatedly fail to prevent banking crises. This creates pressures to introduce joint liability sooner or later. Financial policy guidance and control are based on the restrictions imposed by regulators instead of continuous and flexible assessment made by the markets, i.e. market discipline. Economic history lends no support to the notion that banking crises could be prevented by supervision.

⁴ In extreme cases, this could mean financing the public debt of the member states through the ECB.

Instead, banking crises can only be averted through the introduction of the right incentives within the banking system itself.

A strong federation as the true political union

There are well-functioning federations in the world such as the United States, Germany and Switzerland. Invoking the example of the United States, one could argue that the main task of a strong federation is to produce public goods (national security, foreign policy and a free internal market as a minimum), provide social security for citizens and assist the member states in the event of asymmetric shocks. Characteristic of a strong and successful European federation is that it would work in largely the same way as existing federations.⁵

The EMU's prospects for becoming a successful federation appear quite bleak, and for a long time to come. The applicable criteria could be outlined as follows:

- Sufficient symmetry of the member states' economic performance.
- Reduced significance of asymmetric shocks.
- Compatibility of the labour market mechanisms with the monetary union.
- Adoption of a credible budgetary discipline at the national level.
- Sufficient similarity in terms of political culture and values.
- Willingness to relinquish national sovereignty in favour of a federation.

Due to the present-day economic asymmetry between the member states, we are far from achieving a federation based on the EMU and turning it into an economic and political success.

In principle, a strong euro federation can be operationally efficient. Most likely, such a structure could only develop on a voluntary basis and, even in the best case scenario, over a very long period of time. Until that scenario materialises, the eurozone will – almost by definition – operate inefficiently, while at the same time probably undermining income generation. For a fairly long time, the eurozone would be in the same position as Britain was early in the previous century – the rest of the world outgrows it before the burden of the past can be shed.

⁵ Of course, the US evolution into a federation was a long process.

Return to national currencies

It is not possible to predict the EMU's performance over the next 10 to 20 years. Despite the current political commitments, a disintegration of the EMU cannot be excluded in the light of economic history.

Nor is it impossible for the monetary union to be dismantled partially: one or several of the crisis-affected countries could exit the EMU. The question is whether such an exit is in the best interest of the country involved. For example, Greece cannot have any strong incentive to leave the euro for as long as it can expect assistance from other member states. According to public sources, Italy, a country with a diversified production sector, considered leaving the euro in 2011.

Looking at the situation from another standpoint, there may be a natural explanation why the euro politicians have not allowed Greece to exit. In the light of economic history, it may be argued that Greece would, in fact, be already on a positive growth path if it had pulled out of the EMU and thus allowed its currency to depreciate. The latest case supporting this view is the successful recovery of Iceland based on its own currency following an out-and-out collapse of its economy. From this perspective, funding to Greece has been continued in order to secure the unity of the eurozone.

In practice, the return to national currencies could be implemented through a basket currency or individual exits. Nordvig (2014) has proposed a so-called ECU-2 basket (Euro 2.0 redefinition), which would mean backtracking the same steps taken when the euro was originally adopted. The euro would be legally defined as a basket currency largely in the same way as the ECU was defined before 1 January 1999 at a 1:1 exchange rate relative to the euro. In the basket currency, the national currencies would be adopted by each member state side by side with the euro. Initially, they would be valued at a 1:1 exchange rate relative to the euro and one another. The rates would subsequently be floating and hence, be determined by supply and demand. Euro-denominated contracts would continue to be euro-denominated contracts, except that now, they would exist in the ECU-2 context. The basket euro could continue to exist forever or, only during a transition period, and for as long as any euro-denominated contracts are outstanding. The legal uncertainty

could perhaps to a large extent be handled by the ECU-2 model.⁶

This step would admittedly have its own consequences, but the disruptions to the financial and banking system would be moderate and a far cry from the threat scenarios so frequently espoused.⁷ The currencies of weak countries would weaken and their competitiveness would improve, while strong countries would experience the opposite. Effectively, debts and receivables would remain euro-denominated.

If a basket currency was adopted, sovereign debt could remain euro-denominated. This would benefit the creditors of weak countries as compared to a situation where the receivables were converted to a currency with a lower value. Similarly, and importantly for companies, the euros in all euro-denominated currencies would be of equal value irrespective of the governing law of the contract. Individual euro members could, within the limits imposed by their legal systems and political realities, convert their debt into the new domestic currency, at least in the case of contracts made under national law.

Household debts and existing investments would presumably remain euro-denominated (unless redefined and converted into domestic currencies by way of legal amendments), but all future domestic market revenues would be generated in national currency. The financial position of households in weak countries would deteriorate and that of households in strong countries could improve. From the point of view of the economy, the situation would harmonise when exchange rates even out differences in competitiveness, even if the short-term adaptation would be painful for some crisis-affected countries. While the Deutschmark would appreciate, the national currency of Greece, for example, would depreciate substantially and so would the Italian currency, but to a smaller extent.

⁶ Nordvig (2014) stressed the importance of legal aspects if the euro is phased out. Governments have the possibility of amending the financial agreements governed by their own respective laws. It is essential to know the law by which the contracts are governed, as well as the jurisdiction in which any disputes are to be settled.

⁷ We can refer to the calculation (NExit) regarding the Netherlands' exit from the euro mentioned at the beginning of the study. The calculation suggests that NExit would have had hardly any repercussions for the financing and banking system. According to Nordvig's calculations (2014), the debts and receivables of the Finnish economy are balanced to the extent Finland's exit would not have any significant implications for us. Moreover, while nearly all of Finland's sovereign debt is governed by Finnish law, no legal ambiguities as to the payment currency would arise. Finnish companies, too, mostly apply Finnish law in their euro-denominated commitments.

The options available for Finland?

In terms of size, Finland is a small member state in the Economic and Monetary Union and its relative weight in the eurozone economy and decision-making is modest, just 1.8 percent according to the ECB capital key. The book by the EuroThinkTank of Finland suggested that Finland has three main options to choose from:

- Continued involvement in the evolution of the 18 euro members into a federation.
- Withdrawal from the federalist evolutionary process and a unilateral return to the Maastricht Treaty (Maastricht 2.0) while keeping options open as to further steps.
- An immediate exit from the euro.

Option 1: driftwood

The ‘driftwood’ option means participation in the federalist evolution and adaptation to the policies mainly determined by the large member states. Finland becomes involved in a process whose outcome it cannot really influence. Until a strong federation is in place, the eurozone would, at best, exist as a weak federation. This would mean slow and confused decision-making and the continuation of a vague economic policy. During the evolution towards a strong federation, Finland would have to be prepared for sluggish economic growth, on-going income transfers and declining sovereignty.

An inflexible and non-innovative Finland with a growing level of debt would fit into this type of federation. Finland would not have much to lose in a weak-growth federation in which a sizeable part of the eurozone would be in dire straits economically. The only triple-A country would be Germany, which would support the other members financially in exchange for sway and influence.

Acceding to a strong euro federation would be in Finland’s best interest if the country had a strong and thriving economy and wanted to become one of the federal states of Germany. A strong federation would develop democratic decision-making institutions and be a major player in the global economy. Its population, approximately 330 million, would be equal in size to that of the United States. A strong, mature federation could conceivably appreciate experts even from a small nation. However, because of its strong

economy, Finland would have to contribute a higher amount of funds to federal use than the other states on average, which would offset the benefits of membership.

Option 2: keeping options open

As an option ‘slipstreaming’ means withdrawing from the federalist evolutionary process and returning unilaterally to the Maastricht Treaty (Maastricht 2.0). This would mean that, as the evolutionary process proceeded in small steps, Finland could at some point decide that it would not participate in the next step, which would represent a sort of threshold. Any decision to withdraw from the federalist process would have to be made by the Finnish Parliament. One benefit offered by this strategy is that it would be possible to pull out of the euro unilaterally at a later date. Such a withdrawal would not be without political consequences; however, it would spare Finnish taxpayers from supporting countries in crisis in the future. More importantly, Finland would not be involved in the efforts to manage euro members’ debts on a joint liability basis and it would retain its sovereignty with regard to economic policy. It is worth bearing in mind that those EU member states (Sweden, Denmark, Britain, Lithuania, Poland, the Czech Republic, Romania and Bulgaria) that are not part of the Eurogroup have not participated in extending credit to Greece, for instance, either. However, for Finnish banks to be able to do remain in the ECB system, it would be necessary, in practice, to agree on the use of the euro and related arrangements.

The Eurogroup treaties, however, have been drafted in such a way that, for example, any support drawn under the ESM is conditional upon each euro member having incorporated the fiscal compact or the balanced budget act in its national legislation. Finland included this fiscal law in its legislation as of the beginning of 2013. Presumably, all future intergovernmental treaties between euro members will also be combined, making it extremely difficult to stay out of any single agreement.

Withdrawal from integration would lead to political solitude (chosen by Sweden and Denmark), but would preserve democracy; it would even make it possible to retain the euro if this were felt to be important for trade policy reasons and if the EMU authorities agreed to that.

Option No. 3: Fixit, return to the Finnish markka

The third option is a Nordic one – an immediate exit from the euro. An exit from the euro would mean the re-adoption of Finland's own currency. Nordvig (2014) has calculated that Finland's financial receivables, investments and debts in the eurozone would not result in any significant financial gains or losses. Of course, the effects would depend on how the markets would value the new currency. Based on the data available at the end of 2013, Nordvig (2014) estimates that the independent markka would be 7 percent weaker than the euro. Until the last few years, Finland's current accounts have shown a surplus, and so it would hardly be necessary for Finland to regulate the movement of capital. Nor would any significant systemic impacts on capital, credit or derivative markets be anticipated.

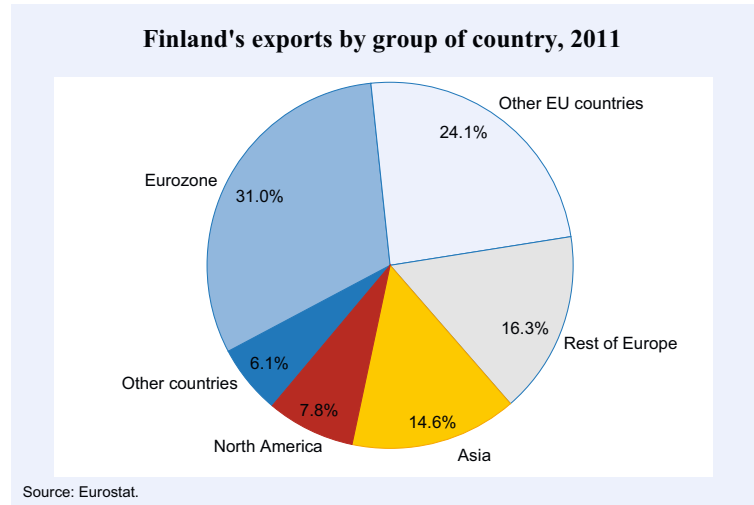
What options could Finland consider?

According to the book by EuroThinkTank, Finland will survive in any currency system as long as its economy is sound. So can Finland's ability to sustain a healthy economy and balanced public finances be trusted? It may be doubted on valid grounds. Finland's political system is disintegrated, its labour market is dominated by strong unions and its tripartite bargaining system is conservative, effectively blocking necessary structural reforms.

If Finland were unwilling or unable to look after the economy well, should the country strive to live off the European federation as a silent partner or sink into poverty amidst other counties with a currency of their own? If Finland's decision-makers were unable to pursue a sound economic policy beneficial to the country, should it remain part of the eurozone in the hope of receiving income transfers? Or should it instead seek to remain outside the euro union in order to allow the floating markka to take care of the necessary adjustments?

If Finland, by contrast, were able to manage its economy well, would it make sense for the country to join a joint liability system as a net payer? If Finland stays in

Figure 4



the euro, the pressures to amend the labour market system would mount. The weaker the Finnish economy is, the greater these pressures would be.

At present, the EMU countries only account for a little over 30 percent of Finland's exports. Contrary to all expectations, this share has fallen since the adoption of the euro. In 2000, nearly 34 percent of Finland's exports went to the eurozone, whereas the corresponding figure in 2011 was only 31 percent. Important export markets for Finland are Sweden, the United States, Russia and Britain, none of which are an EMU country.⁸

Sweden's position, with its own currency and labour market solutions, is better than that of Finland. Moreover, Sweden already carried out most of the necessary political reforms after the 1990s depression. Consequently, Finland would be in a tougher situation than Sweden even if it had its own currency. Even so, a national currency would serve Finland's purpose better than the euro. Finland would have an exchange rate that it deserves.

Ultimately, Finland's relationship with the monetary union should be determined by the will of its people. Does it want to be part of a superpower or does it want to preserve the right of self-determination? Before making the choice, Finland needs to decide what it wants and what it is striving for. Making the choice is inevitable.

⁸ The fact calls for an explanation why Finnish industry is such a keen supporter of the euro. One explanation could be that if Finland stays in the EMU, a labour reform and further flexibilities in the labour market become necessary. Yet, flagging out of the Finnish industry has intensified since the introduction of the euro. Another point worth noting is that Finland's accession to the euro was strongly advocated by the trade unions.

References

Bold, J. and J.L. van Zanden (2013), *The First Update of the Maddison Project: Re-Estimating Growth Before 1820*, Maddison Project Working Paper 4.

Bordo, M.D. and L. ja Jonung (1999), *The Future of the EMU: What Does the History of Monetary Unions Tell Us?*, NBER Discussion Paper 7365.

De Macedo, J. and U. Lempinen (2013), *Exchange Rate Dynamics Revisited*, NBER Working Paper 19718.

Hendry, D.F. (1995), *Dynamic Econometrics*, Oxford: Oxford University Press.

IMF (2013a), *A Banking Union for the Euro Area*, IMF Staff Discussion Note, February.

IMF (2013b), *Toward a Fiscal Union for the Euro Area*, IMF Staff Discussion Note, September.

NExit (2014), *Assessing the Economic Impact of the Netherlands Leaving the European Union*, Capital Economics Limited.

Nordvig, J. (2014), *The Fall of the Euro: Reinventing the Eurozone and the Future of Global Investing*, New York: McGraw-Hill.