

**MEMO**October 8<sup>th</sup> 2014**”NO” TO BANKING UNION  
COULD COST BILLIONS****Contact:****Cheif Economist, Mikkel Høegh****+45 21 54 87 97****mhg@thinkeuropa.dk**

*RESUME The banking union can be viewed as an insurance scheme, and taking out insurance can result in costs in the form of insurance premiums. At the same time, the banking union is a special insurance scheme, with Denmark risking having to pay even more if we choose to operate outside the cooperation. The final bill will depend on the size of risk premium the financial markets believe Denmark should pay. However, there is significant risk that the bill will end up costing tens of billions of kroner.*

*In this memo, three different scenarios are examined: the Swedish, the critical and the British. Calculations based on the differences in interest rates show that the Swedish scenario could cost Denmark 1.4 million kroner a year, the critical 3.8 billion kroner per year and the British up to 11 billion kroner annually. If Denmark takes a wait-and-see approach to the banking union, we will stand outside of it for several (e.g. 5) years. This would bring the total amount of expenses up to between 7 and 55 billion kroner.*

*History shows that the financial crises are much worse than currency crises from a growth perspective. Financial crises are therefore more expensive, seen purely from a socio-economic perspective, than currency crises. The interest rate differentials indicate a currency risk, which pulls Think Tank EUROPA's calculations in a conservative direction.*

*If Denmark stands outside the banking union, the Danish banks will need to give their capital buffers a boost. This in itself means increasing interest rates by introducing higher margins. This has been documented, for example, through thorough analyses conducted by the International Monetary Fund (IMF).*

## MAIN CONCLUSIONS:

- It could cost Denmark tens of billions of DKK if it chooses to stand outside a European banking union and, as a result, the insurance scheme it covers.
- If Denmark says “no”, the capital markets are very likely to demand a higher risk premium. This will be by no means free for Denmark if the government chooses a wait-and-see policy.
- New calculations from Think Tank EUROPA show that these expenses could amount to somewhere between 1.4 and 11 billion kroner a year, depending on the financial markets’ assessment of the Danish risk.
- Denmark could very well stand outside the banking union for at least five years. The worst-case scenario could see the cost soar towards 55 billion kroner.
- The calculations are conservative, as they are based on the expenses incurred in having an independent currency. Meanwhile, experience shows that financial crises are more expensive than currency crises.
- Capital requirements for the Danish banks will most likely increase if Denmark stands outside of the banking union. This means that banks will have to increase their margins, which corresponds to a higher interest rate. Each time the capital coverage ratio is increased by one percentage point, Danish interest rates will rise by 0.19 percentage points, analyses from the IMF show.
- The Danish banks are most exposed to Sweden and the UK. However, these countries are exposed to the Eurozone, which means that Denmark is indirectly exposed to the Eurozone as well.

## What will be the cost of standing outside the banking union?

The banking union is one of the major items Denmark needs to take a decision on this autumn. The banking union can be seen as insurance against future banking crises, so the obvious question is how high the insurance premium will be. However, this question is not an easy one to answer, as there will also be costs associated with standing outside the banking union. These expenses will materialise in the form of a risk premium – a supplement to the Danish interest rate that will result in a higher interest rate.<sup>1</sup>

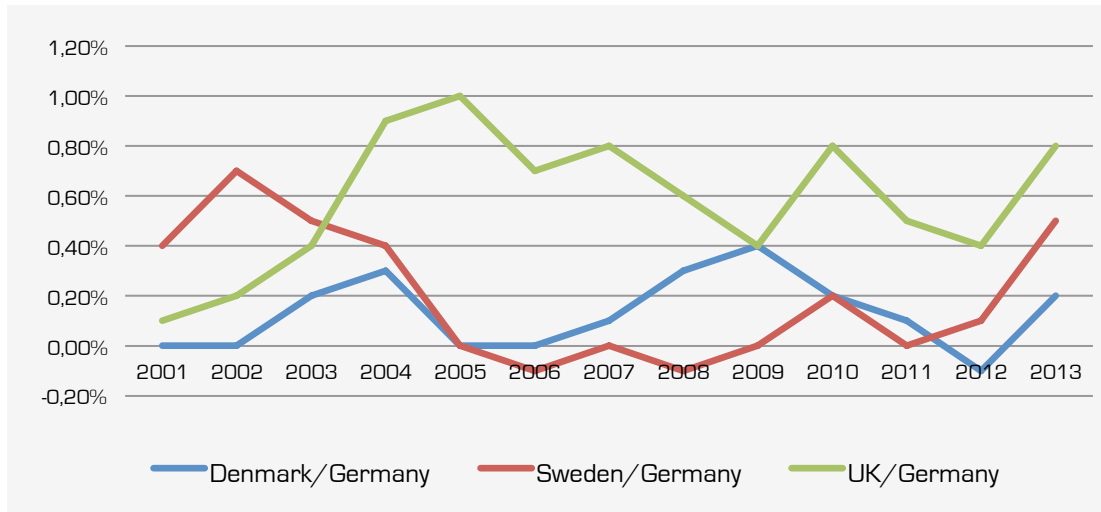
Several factors will influence the total risk premium, and it is difficult to break down a risk premium on a bond and analyse each factor individually. The risk premium is function of a range of parameters, such as debt levels, political and financial stability and credit ratings. It is also hard to determine what the final risk premium will be.<sup>2</sup> In addition, it is difficult to tell what the cost of standing outside the banking union has already been in terms of bond prices. However, there is little evidence that this should be the case as the interest rate differentials were not increased after the introduction of the banking union in September 2012. It is only clear that Sweden will stand outside the banking union and that it is uncertain whether Denmark will take part in it or not. See figure 1.

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<sup>1</sup> This argument is supported by, among others, the Danish Bankers Association in the Danish newspaper Politiken, 12 December 2012  
<sup>2</sup> [The National Bank has, for example, conducted studies which show that relationships between the individual parameters are not stable over time in relation to the interpretation of interest rate differentials. For instance, a credit risk means more in the wake of the financial crisis than it did before \(see Quarterly Review 1, Quarter 2013 section 2\).](#)

**Figure 1. Launch of a banking union will not widen the interest rate differential**

*Interest rate differential on government bonds, expressed in percentage points*



Source: Danish National Bank and Think Tank EUROPA.

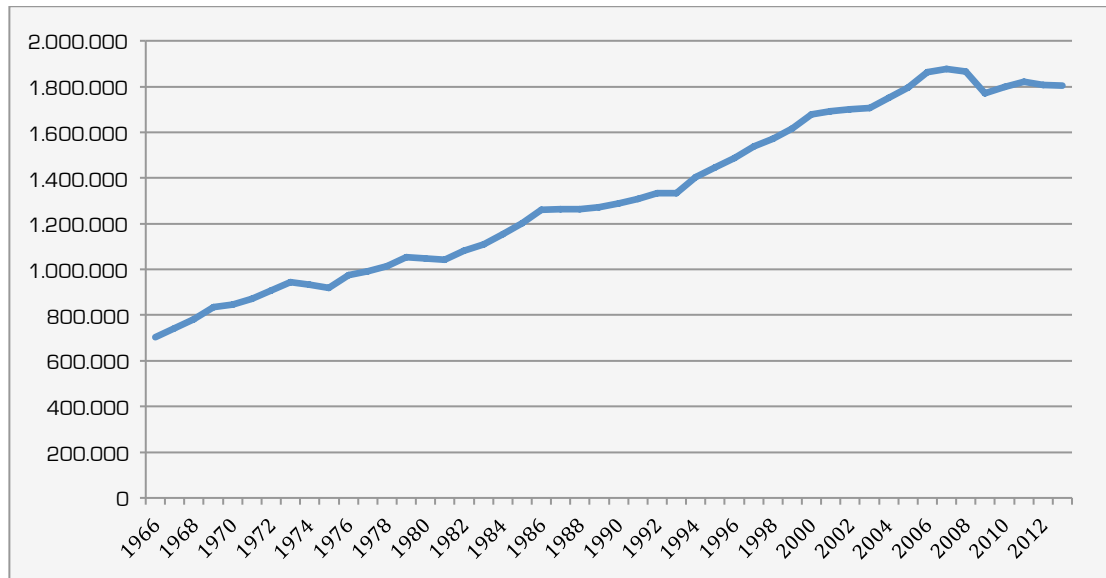
What is noteworthy about the interest rate differentials is that the difference between Denmark and Sweden became significantly greater between 2007 and 2009. During this period the Danish finance sector ran into difficulty, with Roskilde Bank being one of the casualties. This suggests that turmoil in the financial system will manifest in the interest rate differential. Therefore, it is not an unreasonable assumption to use the currency risk as a quantification of the risk Denmark runs by standing outside the banking union.

**Finance crises worse than currency crises**

In recent economic history a number of crises have hit the Danish economy. The figure below shows the development in Denmark's GDP.

**Figure 2. Five economic crisis have had an impact on the Danish economy**

*Developments in Denmark's GDP 1966-2003 in fixed prices, in billion kroner  
(2010 prices, chain-linked values)*



Source: Statistics Denmark

Figure 2 shows that there five major economic crises have struck the Danish economy since 1966, which can be seen as fluctuations on a long curve of increasing prosperity.

The crises were caused by a number of different factors. The oil crises at the beginning of the 1970s and 1980s respectively were caused by external supply shocks. The economical political intervention named Kartoffelkuren ('the potato cure') was the exponent of an economic crisis that was caused by a failed economic policy. The Kartoffelkuren, however, did not result in an actual recession, but a period of low economic growth. Then there was the currency crisis at the beginning of the 1990s, when the EMS cooperative collapsed, and finally the recent financial crisis.

As these crises arose from different circumstances, the strength of their negative impact on the Danish economy also varied. The financial crisis has been the worst, and it can be considered as having hit the economy four times harder than the first oil crisis. Therefore, it is not without reason that the financial crisis has been called the worst crisis since the depression in the 1930s. See figure 3 for an evaluation of the individual crises.

### Figure 3. The strength of the Denmark's economic crises

*Setbacks in GDP in fixed prices, in billion kroner and by percentage*

Crises	Absolute change in GDP	Change in GDP in percentage	Type of crisis
2007-2009	-108.363	-5,8	Financial crisis
1992-1993	142	0,0	Currency crisis
1986-1988	3.032	0,2	"Kartoffelkur"
1979-1981	-12.079	-1,1	Second oil crisis
1973-1975	-24.198	-2,6	First oil crisis

Source: Statistics Denmark and Think Tank EUROPA.

The following calculations use a historical interest rate differential, which conveys a currency risk in reality. However, the figure shows that a financial crisis that threatens to pull systemically important banks down with it can give rise to a much more severe downturn than the collapse of EMS did.<sup>3</sup> This suggests that there is a far greater risk of a recession being caused by a financial crisis of this nature than by a currency crisis. On the other hand, the currency crises have occurred more frequently over time, as the oil crises can also be considered as currency crises which resulted in a loss of confidence in the Danish crown.

Historically speaking, the financial crisis has been the one that has cost the Danish economy the most. In this context, it is worth keeping in mind that the banks that collapsed during the financial crisis were small banks. There would be a much greater economic downturn in Denmark if one of the major systemic banks went down.<sup>4</sup>

In short, finance crises strike less frequently but with more force than currency crises. It is therefore a conservative estimate to use the markets' evaluations of currency risk to assess the implications of the Danish economy standing outside of the banking union and missing out on its share of benefits from the European bank insurance.

### Three obvious scenarios

The moderate scenario is *a Swedish scenario*, which would involve bringing the interest rate in Denmark up to the same level as in Sweden. This corresponds to

<sup>3</sup> For a comparison of the EMS collapse and the financial crisis, see, for example, the National Bank's Quarterly Review, 4<sup>th</sup> quarter, 2012. Again, it is remarkable that EMS's collapse did not lead to a recession.

<sup>4</sup> For an assessment of the Danish banks' balance relative to GDP, see the memo 'Denmark needs a banking union', Think Tank EUROPA, 2014. (<http://english.thinkeuropa.dk/node/156>)

a 0.07 percent rise, which is equivalent to the average interest rate differential between Denmark and Sweden since the introduction of the euro.

*The critical scenario* would be to widen the interest rate differential by 0.2 percentage points, which is the risk premium Sweden pays to stand on its own two feet when it comes to exchange rate policy. The 0.2 percentage points correspond to the average interest rate differential between Sweden and Germany after the euro was introduced. This could amount to a hefty bill relative to the current pricing in the financial markets.

Finally, *the British scenario* poses a significant risk due to its further uncoupling from the EU's core countries. This could imply an additional yield of 0.58 percent points, which corresponds to the average interest rate differential between the UK and Germany since the euro's inauguration. According to the IMF's estimates, the interest rate could in fact rise this much if the banks had to increase their capital adequacy ratio by only three percentage points as a result of Denmark not being part of the banking union's insurance scheme. It is not unrealistic to predict that the banks would be forced to increase their capital adequacy ratio by an amount of that magnitude, if previous international experience is anything to go by. See page 11 for more on the banks' funding costs.

It is important to keep in mind that the current interest rate differentials have narrowed in recent years, which stresses that relatively conservative estimates are given. A so-called country-specific shock could trigger a significant widening of the interest rate differentials, as we saw in Sweden, for example, after the EMS collapse. The reality probably lies somewhere in between, although one can not necessarily assume that the interest rate differentials are stable, as renewed financial turmoil could lead to greater shifts. Similarly, the markets have not yet considered a risk premium associated with standing outside the banking union, which could be because the banking union is not yet fully established.

In *the Swedish scenario*, it is assumed that the interest rate generally rises by 0.07 percentage points. As Denmark has a national debt of 837 billion kroner, this increase alone could equate to an additional cost of 0.6 billion kroner per year. In addition, the Danish monetary financial institution (MFI) sector has a domestic loan of 4,642.50 billion kroner.<sup>5</sup> A higher interest rate of 0.07 percent on these

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<sup>5</sup> These figures are from the National Bank's MFI statistics at the end of 2013 and include deductions on revolving credits. Naturally, there is some uncertainty about how severely these credits have been deducted. It is estimated to be a minor problem for the overall equation as revolving credit accounts for a smaller share of total lending. Lending includes respective loans in dollars and euro, as the credit spread is thought to strike the creditor's home country of the creditor.

debts will incur 3.3 billion kroner in yearly expenses. In total, 0.07 percent higher interest rate costs 3.9 billion kroner per year, assuming an unchanged level of debt. If the debt amount changes, it will naturally have an impact on the level of expenses. The calculation of the expenses are based on a 'ceteris paribus' – all other factors being equal – assumption.

However, a higher interest rate is not just an expense. It is also a financial asset, with a portion being invested in interest-bearing assets.<sup>6</sup> The MFI sector therefore has a domestic deposit of 1,435.60 billion kroner. For the purpose of simplification, we assume here that will be a parallel shift in the yield curve, knowing that in practice this does not occur very often. An additional yield of 0.07 percent of this amount results in an annual income of 1 billion kroner. However, this is an inflated estimate, as a portion of these assets is invested in short-term demand deposits that are hardly interest-bearing.

Lastly, Denmark has pension fund assets to the value of around 3,600 billion kroner, approximately 60 percent of which, according to the Danish National Bank, is invested in interest-bearing assets.<sup>7</sup> This means that 2,160 billion kroner is expected to be paid back at a higher interest rate, generating additional income of 1.5 billion kroner per year.<sup>8</sup> These 1.5 billion kroner, however, will only become income when pension funds are paid out<sup>9</sup> and in accordance with assumed parallel shift in the interest curve. A portion of the pension fund assets will be invested in short-term demand deposits that are hardly interest-bearing. We are aware that we are overestimating the return on the financial assets, but this is because it contributes to the underestimation of the overall cost of standing outside the banking union.

Overall, *the Swedish scenario*, with a yield premium of 0.07 percentage points, would cost Denmark 1.4 billion kroner in additional expenses.

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<sup>6</sup> A portion of the assets are invested in shares, which would not immediately be affected by a banking union. Denmark's participation in the banking union will affect the pricing of bank shares. This effect is disregarded, as the value is quite difficult to assess.

<sup>7</sup> Some of these assets are foreign, and these are disregarded. Also excluded is the fact that the proportion of assets placed in investment funds, can also be placed in the Danish interest-bearing assets. In addition, see the quarterly statement K1 2012. It is assumed that the distribution among asset classes is relatively stable, which is clearly not a crude assumption when consulting the Danish National Bank's statistics.

<sup>8</sup> Generally, there is a negative correlation between share prices and higher interest rates. We have omitted this effect for conservative reasons.

<sup>9</sup> In practice, this means that the society has a liquidity cost, the interest charges are payable from the start, while the profits are concealed. The profits, however, would be relocated so they are not eroded by inflation.



On the other hand, *the critical scenario*, whereby the interest rate differentiation would be widened by 0.2 percentage points, would incur an even heftier bill. In this case, the total cost of standing outside the banking union would be 3.8 billion kroner per year. Finally, *the British scenario* would be even more costly, resulting in additional expenses to the value of 11 billion kroner per year.<sup>10</sup>

It is not yet known when (or if) Denmark will join the banking union, but it is difficult to imagine Denmark taking this step after only a year of sitting on the sideline. If it chooses to wait and see how the banking union will evolve before entering into the cooperation, it could take years before the decision is made. It would not be unrealistic for Denmark to opt out until the end of the decade, for example, excluding itself from 2015-2020. If we join in 2020, this would give Denmark a reasonable timeframe to monitor the banking union.

This would also mean that the total cost of waiting for five years would increase on a running basis, as it is expected that the financial market would soon realise the risk of opting out of the union. The cost of standing outside the banking union in five years would be between 7 billion (with a very limited interest rate rise) and 19 billion kroner (with a additional yield premium of 0.2 percentage points). The British scenario, which from this perspective appears to be the worst-case scenario, would incur a total cost of 55 billion kroner.

### **The investors' risk premiums**

As mentioned above, it is difficult to break risk premiums on bonds down according to individual circumstances. But the three scenarios on which the above calculations are based, 0.07, 0.20 and 0.58 percentage points respectively, have not been taken out of thin air.

Differences in interest rates on government bonds can be taken as the risk premium investors demand to invest in one country rather than another. The used interest rate differentials used here therefore represent a risk connected to an individual country's currency. These risk premiums are used when we do not know the market's evaluation of the banking union value. The scenarios and calculations, however, are based on careful consideration, as crises in the financial system lead to greater downturns in the economy than currency crises. In turn, the currency crises occur more often.

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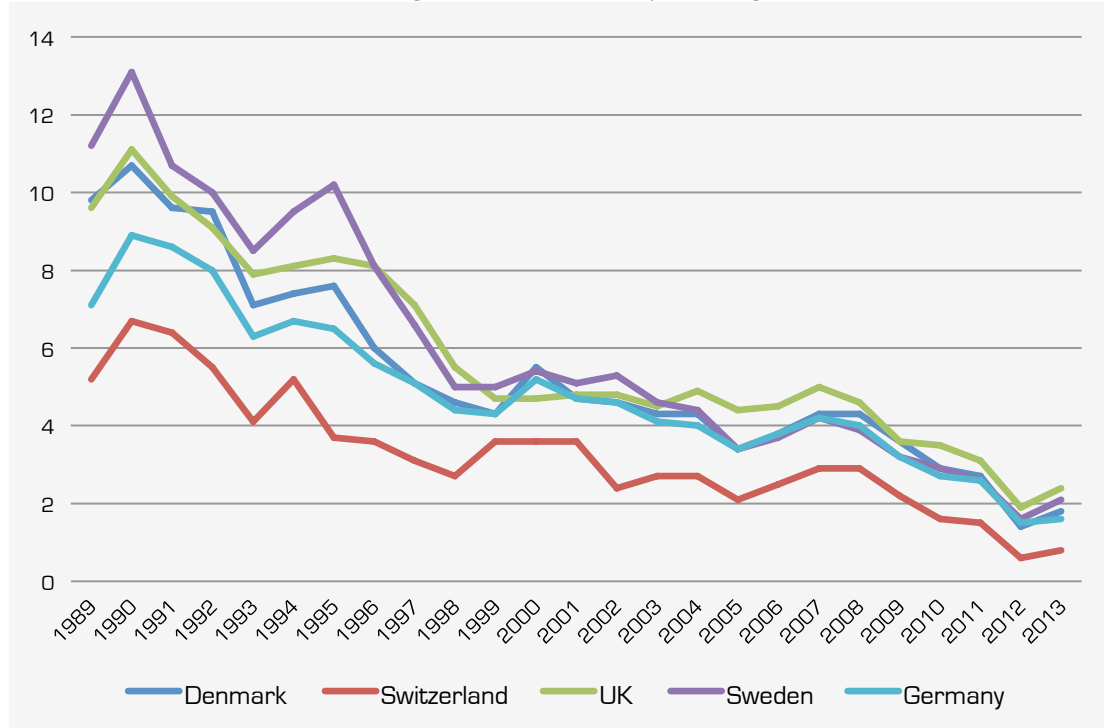
<sup>10</sup> In this case, the liquidity cost is greater, as there are higher interest costs and a higher profits over the year.

In Europe there is a tradition of using Germany as a benchmark when comparing interest rate differentials, as it is the largest country in the Eurozone.

Switzerland has the lowest interest rates in Europe, even though they are not part of the Eurozone. This is due to its special status as a safe haven in times of economic crisis, as well as the unique structural advantage it has in connection with years of bank secrecy and its position as a safe haven for finance.

**Figure 4. Denmark's fixed exchange rate policy means a minor interest rate differential in comparison to Germany.**

*Interest rates in selected countries, government bonds in percentage*



Source: Danish National Bank.

Figure 4 shows that Denmark currently pays a relatively small risk premium compared to Germany. This expense can be considered as the risk premium we pay for being outside the Eurozone. It is less than Sweden's, because, despite everything, we have maintained a fixed exchange rate policy which runs a lesser risk of fluctuating than Sweden's, where there is a tradition of devaluation. The Swedes therefore pay a small interest rate premium on a regular basis to maintain their exchange rate policy.

Since the introduction of the euro, Denmark has paid an average risk premium of 0.13 percentage points in relation to Germany, while Sweden has paid 0.2 percentage points. In simplified terms, it can be said that Denmark obtains a

discount of 0.07 percentage points by following a fixed peg exchange rate policy instead of having a floating currency as in Sweden.

**Figure 5: Historical interest rate differentials**

*Interest rate differentials on government bonds in percentage points*

Interest rate differential	1989-2013	1989-2000	2001-2013
Sweden/Denmark	0.68	1.34	0.07
Denmark/Germany	0.49	0.87	0.13
Sweden/Germany	1.17	2.22	0.20
UK/Germany	1.00	1.45	0.58

Source: Danish National Bank and Think Tank EUROPA.

An interest rate differential of 0.07 percentage points does not sound like much. However, it can amount to billions if you have a large debt.

In relation to the current interest rate differential, one should exercise caution before declaring what is normal. Right now we are finding ourselves in the wake of the financial crisis with low interest rates, but these were up high throughout the 1990s when there was a great deal of currency turbulence.

This means that when assessing investors’ risk premiums, the periods you take into account are quite crucial. This memo looks at the period after the euro was introduced (i.e. after 1 January 2002). This is a rather conservative choice, as there have been relatively few currency crises since its introduction, particularly in Northern Europe, which at times during this period has been likened to Switzerland’s status as a “safe haven”. If we had chosen to examine interest rate differentials over a 25-year period, for example, the costs associated with standing outside the banking union would appear much greater.<sup>11</sup> Therefore, the interest rate differential reflects the past, but not necessarily the future.

The idea behind the banking union was to ensure financial stability in Europe. It is difficult to tell which future investors will demand from countries that choose to stand outside. If you use the rates that have followed from the establishment of the euro and the risk premiums associated with being outside of the Eurozone, it is possible to make a relatively conservative, but reasonable, estimate. As previously mentioned, the reason is that crises in the financial system hit harder than individual currency crises.

<sup>11</sup> Based on foreign exchange risk premiums.

The initial calculations should therefore be seen as an estimate of what it would cost to remain outside the banking union. In relation to the euro debate, the interest rate differential can often be seen as the insurance premium Denmark pays for its ability to devalue its currency in accordance with country-specific shocks.<sup>12</sup> It seems therefore not unrealistic to assume that a similar risk premium would have to be paid to stand outside the banking union, which implies that a country is left to deal with its country-specific shock in relation to the financial sector. In this context, it is worth keeping in mind that Denmark, as mentioned, has some of the largest systemic banks measured in terms of our economic size.<sup>13</sup>

### **Denmark is most comparable to Sweden**

Sweden is the European country that is most comparable to Denmark in terms of levels of debt and public deficit. At the same time, Sweden is completely outside the Eurozone and does not intend to participate in the banking union. There are naturally other countries that are similar to Denmark, including the Netherlands and Finland, but it is worth keeping in mind that there are not many countries that have a low levels of debt as Sweden and Denmark.

In fact, Sweden has a slightly lower level of debt than Denmark and, accordingly, the Swedish economy is not dependent on revenue from the North Sea and its future demographic challenges are less pronounced. These differences can result in a slightly higher risk premium for Denmark than Sweden. There are therefore several arguments against using Sweden as the most comparable country to Denmark, as Sweden has certain structural advantages over Denmark.

### **The banks' funding costs**

Another way to assess the cost of standing outside the banking union is to look at the banks' funding costs, i.e. the expenses banks have to pay for capital securing a sufficient capital adequacy ratio. If Denmark chooses not to join the banking union, it will most likely require the Danish banks to secure themselves with even more. This argument is supported by the Danish National Bank, among others.<sup>14</sup>

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<sup>12</sup> See, for example, 'Euro'ens økonomi og politik', Peter Brich Sørensen, 2000.

(<http://www.econ.ku.dk/pbs/diversefiler/euro.pdf>)

<sup>13</sup> 'Denmark needs a banking union', Think Tank EUROPA, 2014.

(<http://english.thinkeuropa.dk/node/156>)

<sup>14</sup> See, for example, National Bank Director Lars Rohdes' address to the Association of Danish Mortgage Banks' annual general meeting in 2014

An IMF study shows that the Danish banks are already paying relatively high margins compared to other countries when they have to secure their capital adequacy. The cost of an increased capital adequacy ratio obviously depends on a number of factors, such as the banks' overall exposure. Looking at the Danish bank sector overall, the study shows that for each time the capital adequacy ratio in the financial sector is increased by one percent, the Danish interest rates increase by 0.19 percentage points. Therefore, there seems to be a fairly good correlation between increasing capital requirements and higher interest rates in Denmark.<sup>15</sup>

It is therefore not unreasonable to assume that Denmark's interest rates will rise as long as it stays outside the banking union.

If the capital adequacy requirement increases by three percentage points, for example, it would mean that the Danish interest rates would increase by 0.57 percentage points. A three percent rise in capital adequacy may not be unrealistic compared to what will be implemented in Sweden towards 2019. It is very similar to what we have called *the British scenario* above.

Interest rate rises can be explained by, among other factors, that a higher capital adequacy ratio results in increased demand for capital and fewer loans, i.e. a reduced supply for ordinary borrowers. This can put the brakes on economic activity, a finding which is supported by the Swedish Financial Supervisory Authority.<sup>16</sup>

Sweden and Switzerland, which are certain omissions from the banking union, have in recent years increased their capital adequacy requirements quite substantially.<sup>17</sup> Both the Swiss and the Swedish capital requirements exceed the Capital Requirements Directive set out in the Basel III rules.<sup>18</sup> Denmark's capital

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([http://www.nationalbanken.dk/da/presse/taler/Documents/Tale\\_realkreditforeningen.pdf](http://www.nationalbanken.dk/da/presse/taler/Documents/Tale_realkreditforeningen.pdf))

<sup>15</sup> See Bank Behavior in Response to Basel III: A Cross-Country Analysis, IMF, 2011.

(<http://www.imf.org/external/pubs/ft/wp/2011/wp11119.pdf>)

<sup>16</sup> See Capital requirements for Swedish banks, Finansinspektionen, 2014.

([http://www.fi.se/upload/90\\_English/20\\_Publications/20\\_Miscellaneous/2014/kapital\\_eng.pdf](http://www.fi.se/upload/90_English/20_Publications/20_Miscellaneous/2014/kapital_eng.pdf))

<sup>17</sup> See Understanding The Impact Of Stricter Capital Rules For Swiss Banks, Trefis, 2013.

(<http://www.trefis.com/stock/ubs/articles/214775/understanding-the-impact-of-stricter-capital-rules-for-swiss-banks/2013-11-07>) and Memorandum, Sveriges Riksbank, 25 November 2011.

([http://www.riksbank.se/Upload/Dokument\\_riksbank/Kat\\_publicerat/Pressmeddelanden/2011/pm\\_111\\_125\\_nr19e\\_eng.pdf](http://www.riksbank.se/Upload/Dokument_riksbank/Kat_publicerat/Pressmeddelanden/2011/pm_111_125_nr19e_eng.pdf))

<sup>18</sup> See Capital requirements for Swedish banks, Finansinspektionen, 2014.

([http://www.fi.se/upload/90\\_English/20\\_Publications/20\\_Miscellaneous/2014/kapital\\_eng.pdf](http://www.fi.se/upload/90_English/20_Publications/20_Miscellaneous/2014/kapital_eng.pdf))

requirements have also increased in recent years, but there are clear indications that they could rise even more if Denmark stands outside the banking union.

### **The cost of the banking union itself**

One of the basic principles of the banking union is the so-called “Danish model”, whereby the banks themselves put money into a rescue fund. The rescue fund can be used in the event of bank failures and must be phased out. Bank Union must give rise to a form of economies of scale, as there is more to inject money into the fund. At the same time there are also several banks that could potentially be saved. In practice, these economies of scale that it becomes cheaper to participate in banking union if more countries participating.

As we know from earlier stress tests that, in individual countries, the proportion of healthy banks exceeds the number of unhealthy banks, then this is an advantage. The idea of insurance is that you share the risk with others, which is why you pay a lower insurance premium as a result of the reduced risk. If Denmark chooses to stand outside the banking union we will have to take out the insurance ourselves, which means that fewer will pay, but there will also be fewer banks that will have the potential to collapse. However, in an earlier memo Think Tank EUROPA has demonstrated that several of the major Danish banks are of a size that is difficult for the Danish economy to manage, in that the systemic banks in Denmark have a balance that clearly exceeds the Danish GDP.<sup>19</sup>

As we know from the rating bureaus, the banking union is, in a purely regulatory sense, regarded as a quality mark. This is because, among other factors, the investors know that they have taken out insurance and because there is a barrier to entry into an insurance scheme. The barrier was established in response to the stress tests to ensure that the banks included in the banking union are reliable. The purpose of the stress test is to ensure that banks will also be strong in the case of a deep recession, including surges in unemployment, significant group depreciation and currency crises.

If Denmark does not join the banking union it will need to secure itself a quality mark of the same value as guaranteed by the banking union. Otherwise it will be more expensive for the Danish banks to raise capital in the financial markets. It is

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<sup>19</sup> See ‘Denmark needs a banking union’, Think Tank EUROPA, 2014.  
(<http://english.thinkeuropa.dk/node/156>)

also highly probable that Denmark will need to strive for slightly better quality because it is a small country, which alone carries an additional risk. This is despite the fact that several of the major Danish banks are already covered by the European stress test. It also has an influence on how the results are handled in practice. In this context, it is also useful if there is a decoupling of the national interests when determining whether a bank should be liquidated or not. This would simply allow for greater credibility, as few national decision-makers would have an incentive to throw their country into a deep recession. Finally, if Denmark stands outside the banking union, it will cause investors additional administrative hassles to invest in Denmark. Therefore, there should be an additional premium to meet the cost of country-specific ways of credit.

In relation to the banking union's operation, this memo assumes that the cost of participating or standing outside the union will be more or less the same. This is quite a conservative assessment, as it is argued above that this will probably be a little more expensive to carry out independent monitoring of the Danish system, partly because it has smaller economies of scale and partly due to its need for additional regulation. The latter can ultimately diminish competitiveness, but this is not considered in these calculations. Diminished competitiveness would be revealed in the form of expanded interest margin.

### **The banks' exposure to the Eurozone**

In the context of the banking union, it is debatable as to whether it is relevant to examine the countries to which the Danish financial sector is exposed. It has been argued that the Danish banks are primarily exposed to Denmark itself, and that it is primarily exposed to Sweden and the UK, which, as mentioned, are outside the banking union. In this context, there are a number of important factors that are worth keeping in mind – one is to consider where there is most credit exposure and the other is to know where the banks get their capital from.

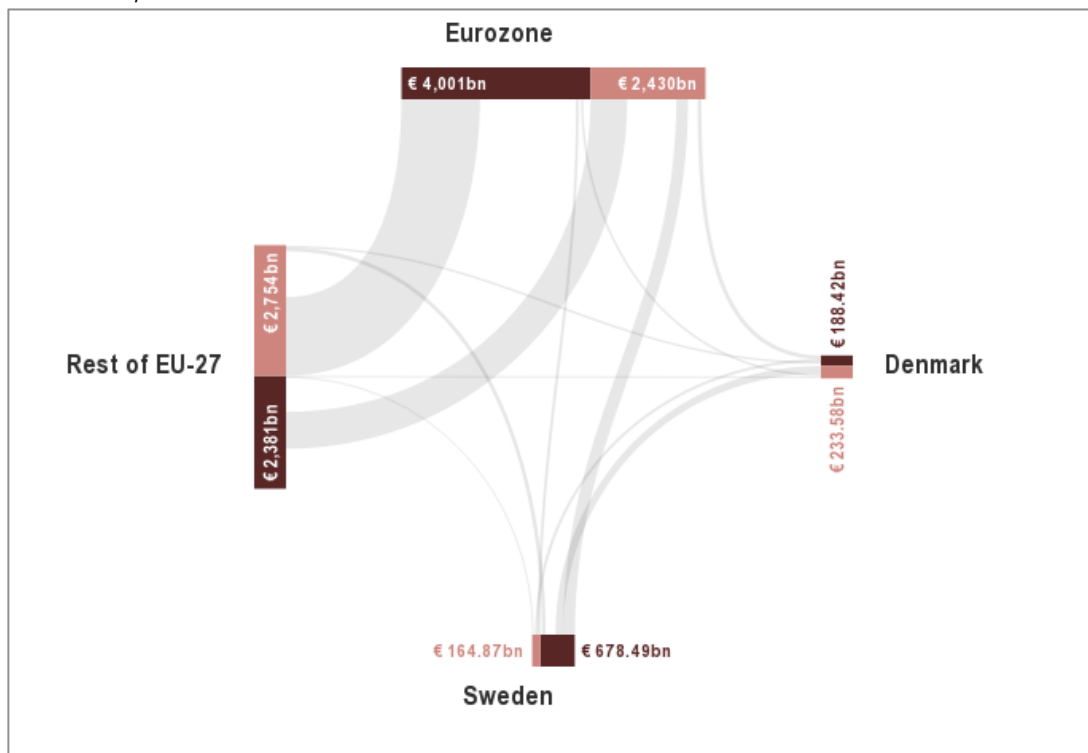
The banks engage in two types of competition: Competition for customers, i.e. credit exposure, and competition for access to raw materials, i.e. capital for capital adequacy purposes. As mentioned, if Denmark stands outside the banking union it will cost more to seek foreign capital for capital adequacy purposes. In the context of credit exposure, it is important that there are both first-round effects and second-round effects in this process. It is clear that the Danish banks are more exposed than Sweden's, and this is also confirmed in studies conducted by, for example, the Bank of International Settlements.

Figure 6 below illustrates Denmark’s high level of exposure compared to Sweden’s. In turn, Sweden is relatively exposed to the Eurozone. This means that Denmark, via second-round effects, would also be exposed to the Eurozone. If the Eurozone runs into trouble, it will not only hit the Swedish economy, but the Danish economy will also be affected.

However, it is doubtful that there will only be second-round effects, as the Danish banks are deeply dependent on developments in the European market. In the summer of 2014, Banco Espírito Santo in Portugal ran into difficulty and this sparked problems in the financial markets. It also had an impact on Denmark. In this context, it should be emphasised that Banco Espírito Santo is a bank from a smaller European economy to which Denmark is not particularly exposed. But it illustrates that the mutual dependencies and connections in the European banking market are woven much more tightly than the direct links and requirements that are often examined.

**Figure 6: The financial sector’s exposure**

*Financial exposure in billion euros between Denmark, Sweden, EU and the Eurozone*



2012 Claims/debts to all available countries in billion EUR (current prices) as reported by creditor banks. Bar lengths relative to largest sum of debts and claims (among displayed countries for all years).

Claims/debts in billion EUR (current prices)

Original data in US-\$. Average exchange rate in 2012: \$1 = €0.7783. For constant prices (base 2005): \$1 = €0.8038.

Source: Bank of International Settlements.