Heat map for analysing the consequences of financial shocks

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The Riksbank continually analyses and oversees the financial system in order to identify and assess risks and threats to financial stability. The Riksbank's assessments, which are largely based on an analysis of a range of quantitative and qualitative variables, are published twice a year in the Financial Stability Report. Risks relating to the financial infrastructure are also described in an annual report entitled the Financial Infrastructure Report.

In order to more systematically analyse and illustrate the consequences if the risks identified in these reports are realised, a so-called heat map can be used. This Economic Commentary presents a method for producing a heat map to analyse the consequences of such financial-stability crises. The Commentary also provides a concrete example of how the heat map can be used.

The heat map – a conceptual framework for consequence analysis

Financial stability is usually taken to mean that the financial system can maintain its basic functions and also has resilience to disruptions that threaten these functions.[2] However, financial stability is difficult to quantify, in contrast, for example, to price stability, where advanced models have been developed to assist in the analysis. There is therefore a need for a formalised conceptual framework that can be used to assess the consequences if risks to financial stability are realised. One example of such a conceptual framework is a heat map. A heat map can be used to simply illustrate how a financial shock can affect financial stability and the real economy. By assessing in different stages how a shock may affect financial markets, financial institutions, the financial infrastructure and the real economy it is possible to get a picture of how serious the consequences may be. One is thus forced in a concrete way to take a stance on the ultimate consequences that a specific risk may have. This also makes it easier to create awareness of these consequences.

Method for the heat map

The method for producing a heat map[3] presented here makes it possible to assess how the consequences of financial-stability risks/shocks will affect a country's financial and real sectors.[4] The method focuses on four channels: financial institutions, financial markets, the financial infrastructure and the real economy. The first three channels indicate how the shock concerned will affect the financial sector. The fourth channel indicates how this shock will affect the real economy.

In order to be able to assess the consequences of a shock, each channel is awarded impact scores: the higher the score, the more serious the consequences. The assessment is made in three stages (see Figure 1). The first stage comprises an analysis of the current situation, which can be said to reflect the respective channels' resilience to disruptions or to indicate the state that each channel is in before the shock occurs. The second stage entails assessing the consequences that the shock may have for each channel. These two assessments are then weighed together in a third stage to provide an impact assessment and result thereafter in the award of impact scores on a scale from 0 (no impact) to 3 (severe impact) for each channel. The analysis also comprises an assessment of the level of uncertainty in the results and of possible contagion effects between the channels.

The results of the consequence analysis can then be presented visually in the form of a heat map, see Figure 2. The heat map presents an overall assessment of how a shock will probably affect the various channels.[5] The width of the rectangles in the heat map indicate the results for the different channels and also show the level of uncertainty in the results. The greater the uncertainty, the wider the rectangles.[6] The width can be set symmetrically around the result, with an equal width on both sides of the impact score.[7]

The heat map is thus intended to illustrate the assessment made for each channel and should reflect the highest stress a channel is exposed to during the first year after the shock has occurred. However, financial shocks can affect different parts of the heat map in different ways. A shock may originate in problems at a specific systemically-important financial institution or in disruptions to the financial infrastructure. A shock that comes from abroad can be expected to affect the financial markets first, after which the consequences of this will spread to the financial institutions and, depending on the character of the shock, also spread to the financial infrastructure. The effects of the shock then affect the real economy. Conversely, a shock may stem from the real economy, for example through a fall in housing prices, that then affects the profitability of the banks.

It is reasonable to assume that shocks within the first three channels can spread and lead to consequences more or less directly, while consequences for the real economy may come with a time lag. Given this time lag, it is reasonable to assume that the consequences for the real economy will not have their greatest impact until towards the end of the defined one-year period, while the financial institutions and markets, as well as the financial infrastructure, will suffer the most serious consequences during the first three months following the occurrence of the shock.

Analysis of the heat map's four channels

In general, the heat map's four channels are calibrated on the basis of traditional stability indicators. Different indicators can be given different weights depending on the specific risk scenario. Calibration is then complemented by an assessment and weighing together of the indicators in accordance with Figure 1.

Financial institutions

The analysis of the channel for financial institutions (mainly banks) focuses on the consequences a shock will probably have for the institutions' ability to function as financial intermediaries. Four indicators are used in the assessment of the consequences for this channel: capital adequacy, loan losses, profitability and liquid assets. Table 2 provides an overall view of what characterises each impact score for financial institutions, where 0 means that the four indicators are not affected while 3 means that the indicators are seriously affected.

Financial markets

The analysis of the channel for financial markets focuses on estimating the consequences a shock may have for the functioning of the Swedish financial markets, which comprises access to liquidity, funding and capital for financial institutions and other companies. Developments on four different sub-markets are therefore analysed. These are the stock market, the money market, the bond market and the foreign-exchange market.[8]

Table 3 provides an overall view of what characterises the respective impact score for financial markets, where 0 means that the functioning of the markets is not affected while 3 means that the most important markets cease to function.

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5. Note that this is not a measure of the level at which the different channels are at a certain point in time, but an assessment of the consequences of a shock.
6. A simple rule for uncertainty is presented in the notes to Table 1.
7. If it is assessed as more likely that a certain result will occur, the width can be set asymmetrically around the impact score. In the example in this Economic Commentary the result is set symmetrically.
8. These sub-markets correspond to those included in the Riksbank's financial-stress index. More information on this index is available in Johansson, T & Bonthron F (2013), Further development of the index for financial stress in Sweden. Sveriges Riksbank Economic Review 2013:1, Sveriges Riksbank.

Financial infrastructure

The analysis of the channel for the financial infrastructure focuses on assessing how the systems that make up the Swedish financial infrastructure are affected in a specific risk scenario.[9] This analysis weighs together the four systems that the Riksbank has deemed to be important for financial stability in Sweden and that the Riksbank thus oversees in its work to promote financial stability. These systems are: RIX (the system for large-value payments between banks and other participants), Bankgirot (offers products and services for the clearing of retail payments), Euroclear Sweden (acts as a central securities depository and manages the settlement of securities transactions) and Nasdaq OMX (a central counterparty that manages the settlement of derivatives and repos).[10]

Table 4 provides an overall view of what characterises the various impact scores, where 0 means that all systems function normally while 3 means that the financial infrastructure is not functioning at all.

In order to be able to assess the consequences of a given shock on the financial infrastructure, we examine how well the systems comply with international principles for the functioning of the infrastructure.[11] The assessment is made in three stages in accordance with Figure 1. In the first stage we analyse how well the systems comply with 24 different principles in nine different areas. The results are then calibrated in an impact assessment, after which the results are weighed together in a third stage.

The real economy

The analysis of the channel for the real economy focuses on measuring how the consequences of the shock for financial institutions, financial markets and the financial infrastructure may affect the real economy. First, the resilience of the real economy to disruptions is analysed and an assessment of how the shock may affect GDP, unemployment and housing prices is made. The results are then aggregated. Table 5 provides an overall view of what characterises the various impact scores, where 0 means that the real economy is not affected while 3 means that the real economy is in crisis.

Illustration of how the heat map can be used – the case of Cyprus

In order to illustrate how this analysis method can be used in a concrete way I have made use here of a specific fictional scenario. This relates to crisis management in Cyprus in the spring of 2013. The Cypriot authorities initially chose to levy a charge on all deposits in the country's banking system in order to fund the management of the crisis. This led to some unease on the financial markets.[12]

This illustrative scenario is set in early 2013. It is assumed that discussions are underway on how the funding of crisis management in Cyprus should be divided between the public and private sectors when the government suddenly announces that all deposits in Cyprus that are not covered by the deposit guarantee will be subject to a charge that will be used to help fund crisis management.[13] As far as Sweden is concerned, it is assumed that this event hypothetically leads to a short period of unease relating to uncertainty about the Swedish banks' exposures to Cyprus (see Figure 3). However, this unease wanes relatively quickly in the scenario as the exposures turn out to be limited.

Heat map for the risk scenario

As this scenario has clear links to the financial system it is natural to assume that its consequences will have most impact on the financial institutions and markets and on

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9. The financial infrastructure consists of systems through which payments are made and which handle transactions with financial instruments. The term "system" refers to the systems that make up the financial infrastructure, that is the systems that manage financial positions and enable financial flows between the various participants.
10. Note that marketplaces are not included in the analysis of this channel
11. BIS (2012), Principles for financial market infrastructures, http://www.bis.org/publ/cpss101a.pdf
12. This example is related to one of the risks that the Riksbank highlighted in Financial Stability Report 2013:1, namely the crisis in public finances in Europe.
13. The process referred to as bail-in.

the financial infrastructure in the first three months following the shock. However, it is not expected that the consequences for the real economy will become noticeable until towards the end of the defined one-year period. It is also assumed that the shock will affect the financial markets first. We therefore analyse the consequences for the financial markets first and then go on to study how the effects spread to the other channels. In the scenario, we assume that economic policy remains unchanged.

Financial markets

Time series that are included in the Riksbank's stress index are used when assessing the current situation. An assessment of the factors not captured by the stress index is also made, for example tendencies towards exaggerated risk taking under favourable conditions and assessments of liquidity on certain sub-markets. The current levels in the stress index indicate that risk is priced relatively low, which may largely be due to the extensive support measures for financial markets that central banks around the world have introduced in recent years (see Figure 4). The price of risk may even be somewhat low, which could lead to major price fluctuations in the event of a shock. At the same time it can be said that the financial markets in general are functioning well, as liquidity on the markets is good. The overall assessment is therefore that the markets' resilience to shocks is relatively high. As an assessment of the current situation, each sub-market is therefore awarded an impact score of 1, which corresponds to good resilience with limited vulnerability (see Table 6).

On the basis of the analysis of the current situation, we then assess how the risk scenario is expected to affect the sub-markets. The money market is expected to be the market that is primarily affected as it is assumed US money-market funds will temporarily reduce their general exposure to European banks. This may also affect Swedish banks' access to funding, above all in US dollars. This in turn could have effects on the Swedish money market in the form of increased volatility and rising interest rates. It is assumed that the initial and short-lived uncertainty about exposures to Cyprus (see Figure 3) will contribute to this. Moreover, the assessment is that the Swedish market for long-term funding (the bond market) and the foreign-exchange market will only be marginally affected, with a moderate increase in yields and increased volatility as a result of declining confidence in the measures presented to manage the crisis in the euro area. There will also be a negative impact on the stock market initially as a result of the negative developments in Europe. This in turn will be due to declining confidence in the measures that had previously helped to reduce uncertainty about the European debt crisis. On the basis of this assessment, the money market is awarded an impact score of 1, while the stock market is awarded 0.75. The two other sub-markets are each awarded 0.25 (see Table 6).

In the final weighing-up of the results for the four sub-markets it is assumed that the degree of uncertainty in the assessments is higher in the case of the money market and stock market. The effects of the risk scenario are also assessed to be relatively greater for these two sub-markets, so that the uncertainty interval for them is set at 0.5 while the uncertainty interval for the other two sub-markets is set at 0.25. The aggregated impact score for financial markets will in this case be 0.56. Aggregated uncertainty will be 0.38 (see Table 6).

Financial institutions

In order to assess the consequences of the risk scenario for financial institutions (banks) we use four different indicators in accordance with Table 2: profitability, capital adequacy, liquid assets and loan losses.[14]

We can note that at the outset the Swedish banks are well capitalised in an international perspective and have substantial buffers of liquid assets. This entails that they have a relatively high resilience to disruptions on financial markets. In addition to this we know from the assessment of the consequences for the financial markets above that the shock in the risk scenario is expected to affect the money market and the stock market most (see Table 6). Given the experience gained during the financial crisis of 2008-2009, this means that it is reasonable to assume that

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14. The assessment is based on the four large Swedish banks on a consolidated level, i.e. including both domestic and foreign operations.

the short-term unease on the financial markets will primarily affect access to, and the price of, the banks' securities funding. It is also reasonable to assume that the banks will above all be affected by short-term securities funding becoming more expensive and, to a certain extent, more inaccessible. This relates to the fact that the banks need to continually refinance these securities as they have short maturities. In addition, some of the US investors that purchase the banks' short-term securities have previously proved to be sensitive to disruptions on the European markets and have quickly reduced their exposures when they have considered the risks to be too high. However, the fact that the Swedish banks are relatively well capitalised and only have small exposures to the financially distressed countries in Europe is assumed to contribute to investors viewing them as being safer than many other banks in Europe. Consequently, it is assumed that the price of, and access to, securities funding will also be better than for many other banks. It is therefore only during the early stages of the risk scenario that unease is expected to contribute to making it somewhat more expensive for the Swedish banks to fund their operations. The assessment is therefore that the consequences of the scenario for the liquid assets of the Swedish banks will be limited and are therefore awarded an impact score of 1.

The somewhat more expensive funding will have only a minor impact on the banks' profitability, so this indicator is awarded an impact score of 0.25. As the consequences for profitability are so limited, the assessment is that the risk scenario will not affect the banks' capital adequacy. Nor is the scenario expected to lead to any loan losses for the banks. However, different factors point in different directions when it comes to the degree of uncertainty in the assessment. On the one hand the Swedish banks have very limited exposures to countries with public-finance problems in southern Europe. On the other hand the Swedish banks have become increasingly dependent on foreign funding in recent years, which means that they are more prone to being affected by higher funding costs and poorer access to funding if unease arises on the financial markets. Aggregate uncertainty is therefore in this case assessed to correspond to the mean value of the uncertainty intervals for the four indicators. The uncertainty interval for the assessment of the risk scenario's effects on financial institutions is thus set at 0.25 (see Table 7).

Financial infrastructure

The assessment of the consequences for the financial infrastructure is based on the analysis of 24 international principles for the evaluation of the functioning of the infrastructure. These principles are divided into nine areas (indicators).

The latest evaluation of how well all the Swedish systems comply with the international principles was conducted in 2010.[15] In this evaluation, 89 per cent of the assessed principles were fully complied with. The principles that were not complied with concerned operational risk[16], control[17], netting arrangements[18] and transparency (see Table 8). These means that three indicators (general organisation, awareness and management of operational risks and transparency) are awarded an impact score of 1, while the remaining indicators are awarded a score of 0.[19]

However, the principles that were not fully complied with are less relevant to the resilience of the Swedish infrastructure in our risk scenario. It is therefore reasonable to now award the indicators covering these principles a lower weight.[20] The assessment of the current situation can therefore be set at 0.067 (see Table 8). We can also note that the systems in the Swedish financial infrastructure do not have any Cypriot members or any technical links to corresponding systems in Cyprus. Furthermore, the systems in the Swedish infrastructure were not affected by the financial crisis of 2008-2009. As the general assessment is that the risk scenario would have much weaker consequences than the latest financial crisis, it is reasonable to assume that

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15. The Riksbank evaluated Bankgirot, Euroclear Sweden and Nasdaq OMX together with Finansinspektionen. The evaluation in 2010 was conducted in accordance with earlier international principles but the results have been "translated" into their equivalents under the current principles, which were published in 2012.
16. In the area "Awareness and management of business and operational risks".
17. In the area "General organisation".
18. In the area "Awareness and management of business and operational risks".
19. If all the principles in a group are complied with, an impact score of 0 is awarded, but if any system has any principle that is only largely complied with then an impact score of 1 is awarded.
20. See the note in Table 8.

these consequences would also have little impact on the infrastructure and they are therefore set at 0. The aggregated impact of the risk scenario is thus assessed to be very limited in this case. The financial infrastructure is therefore awarded an impact score of 0.03, which corresponds to the equally-weighted result of the assessment of the current situation and the impact assessment of the risk scenario (see Table 8).

The degree of uncertainty in the analysis is expected to be small. The width of the uncertainty interval is therefore set at 0.1, thus giving an interval of between 0 and 0.13[21]. This means that the consequences of the risk scenario would probably not affect the financial infrastructure in Sweden.

The real economy

The assessment of the consequences for the real economy is based on an assessment of various components, such as the size of a country's banking sector, the size of public-sector debt in relation to GDP, the level of corporate and household indebtedness and how large a proportion of the deposits in the banking system are covered by the deposit guarantee. This assessment provides a measure of the real economy's resilience to shocks. As Sweden has, for example, a large banking sector in relation to GDP and a high level of household indebtedness, a relatively high value (1.3) is arrived at in this assessment (see Table 9). The next step is to analyse the macroeconomic consequences of the risk scenario. The assessment is that the risk scenario should not have any consequences for GDP, unemployment or housing prices in Sweden. This therefore gives us a value of 0 for this part of the analysis.

The assessment is thus that the risk scenario would have only very limited, if any, consequences for the real economy in Sweden, not least because the economy of Cyprus is one of the smallest in Europe. The aggregate value of the different components is thus very small. By also giving a greater weight to the aggregate value we arrive at an impact score of 0.25 for the real economy. The uncertainty interval is deemed to be medium in this case, which leads to a width of 0.25 on either side of the impact score.

Overall assessment of the consequences of the risk scenario

Once we have compiled the results of the consequence analyses for all four channels we can put together a heat map for the risk scenario (see Figure 5). The assessment is that the risk scenario would above all hit the financial markets, although the consequences would be limited. Unease on the financial markets would then lead to marginally increased funding costs for the Swedish banks. These two channels would subsequently have a very marginal impact on the real economy in Sweden towards the end of the one-year period of the risk scenario. The financial infrastructure in Sweden would not be affected at all.

Useful tool for central banks

This Economic Commentary has presented a method for assessing the consequences a financial shock may have for a country's financial sector and real economy and then illustrating these consequences in the form of a heat map. In order to provide a concrete demonstration of how the method can be used in practice, we have used a specific risk scenario relating to crisis management in Cyprus.

The advantage of the heat map is that it is relatively simple to produce. One is also forced in a concrete way to take a stance on the consequences of a shock. This also leads to clearer communication about the consequences of risks. In this way the heat map can play an important role in the future when one wants to quantify and illustrate the consequences of risks to financial stability in a simple way.

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21. In this case the result should really be an interval between -0.07 and 0.13. No negative impact scores are set using this method.

Appendix

Figure 1. The three stages of the method

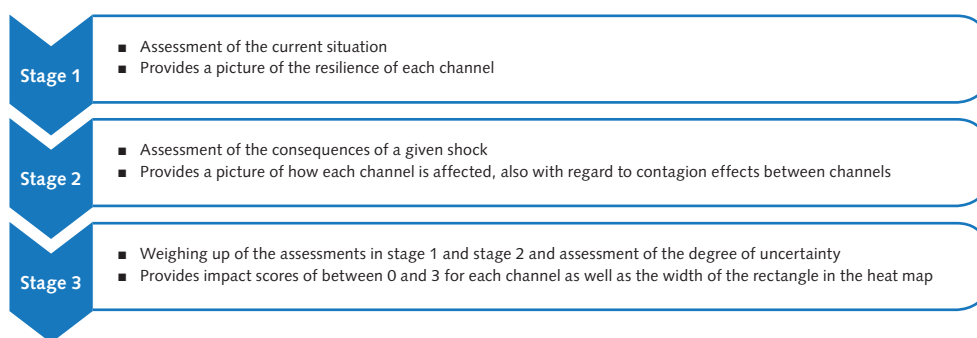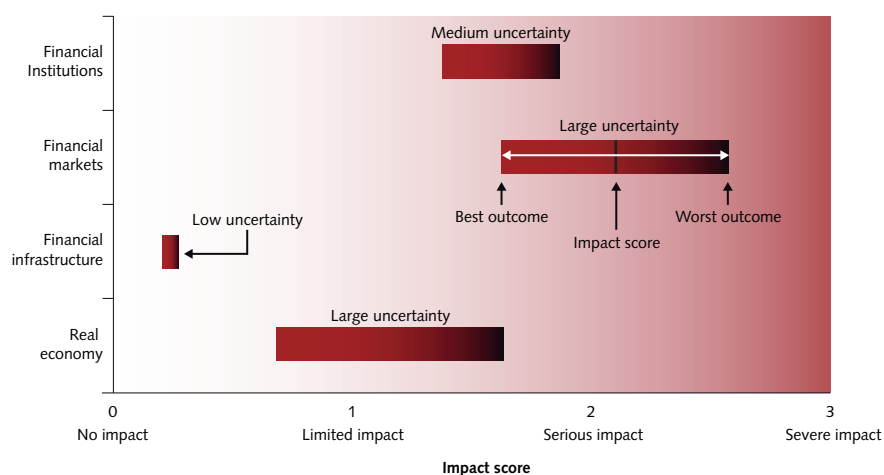| Stage 1	■ Assessment of the current situation ■ Provides a picture of the resilience of each channel
Stage 2	■ Assessment of the consequences of a given shock ■ Provides a picture of how each channel is affected, also with regard to contagion effects between channels
Stage 3	■ Weighing up of the assessments in stage 1 and stage 2 and assessment of the degree of uncertainty ■ Provides impact scores of between 0 and 3 for each channel as well as the width of the rectangle in the heat map

Figure 2. Heat map for the consequence assessment of a risk scenario

Impact score

Note. The heat map in the figure is only an illustration and does not contain an assessment of any particular shock.

Table 1. Overview of indicators in the heat map

CHANNEL	INDICATORS
Financial institutions	Capital adequacy, loan losses, profitability, liquid assets
Financial markets	Money market, bond market, stock market and foreign exchange market
Financial infrastructure	Compliance with international principles for the functioning of the infrastructure, 24 principles in nine areas
The real economy	Relevant variables for resilience (current situation) Relevant variables for assessing the consequences of the shock

Note. Uncertainty is assessed for each channel, that is the width of the rectangles in the heat map in accordance with the following rule: low uncertainty = 0.1, medium uncertainty = 0.25 and high. Unsertainty = 0.5. The width can be set symmetically or asymmetically in relation to the result depending on the assessement. The contagion effects from other channels are also assessed for each channel.

Table 2. Financial institutions

IMPACT SCORE	CONSEQUENCE	POSSIBLE CHARACTERISTICS
0	None	Unchanged capital adequacy Very small loan losses High profitability Small effects on liquid assets
1	Limited	Marginal weakening of capital adequacy in affected institutions Marginal increase in loan losses in affected institutions Fall in profitability in affected institutions Fall in liquid assets in affected institutions
2	Serious	Weaker capital adequacy in affected institutions Large loan losses in affected institutions Substantial fall in profitability in affected institutions General fall in liquid assets
3	Very serious/ system threatening	Substantial weakening of capital adequacy throughout the system Potentially very large loan losses throughout the system Substantial fall in profitability throughout the system Substantial fall in liquid assets throughout the system

Note. Capital adequacy is measured in terms of the CET 1 capital ratio (the ratio between core Tier 1 capital and the risk-weighted value of the banks' assets), profitability in terms of Return on Equity (ROE) and liquidity in terms of the Liquidity Coverage Ratio (LCR).

Table 3. Financial markets

IMPACT SCORE	CONSEQUENCE	POSSIBLE CHARACTERISTICS
0	None	Markets not affected Interest rates/yields largely unchanged Volatility on the markets largely unchanged Liquidity on the markets unchanged
1	Limited	Limited impact on the markets Larger differences between rates for high-risk and risk-free assets Slight increase in volatility Slight weakening of liquidity on the markets
2	Serious	Functioning of the markets highly affected Substantial increase in differences betwen interest rates/yields Substantial increase in volatility Significant weakening of liquidity on the markets
3	Very serious/ system threatening	Functioning of the markets seriously affected Dramatic increase in differences between interst rates/yields Dramatic increase in volatility Dramatic weakening of liquidity on the markets

Note. The assessment is made by analysing the money market, the bond market, the stock market and the foreign-exchange market.

Table 4. Financial Infrastructure

IMPACT SCORE	CONSEQUENCE	POSSIBLE CHARACTERISTICS
0	None	Systems working normally Systems' members unaffected
1	Limited	Some impact on one or several systems Affected members account for a small part of the volume/value of transactions
2	Serious	One or several systems are experiencing problems At least one large member in a central system is affected
3	Very serious/ system threatening	One or several systems have serious problems Several large members are highly affected Central parts of the financial infrastructure are not working at all

Note. The analysis is conducted using an assessment of the compliance with international principles for the functioning of the infrastructure.

Table 5. The real economy

| IMPACT SCORE	CONSEQUENCE	POSSIBLE CHARACTERISTICS
0	None	No impact on access to credit No impact on unemployment or GDP
1	Limited	Financial institutions experiencing problems have small market share (deposits and lending) Losses are covered by the deposit guarantee and DGS can make payments quickly No or limited impact on household and corporate assets No or limited impact on access to credit Limited impact on unemployment and GDP
2	Serious	Financial institutions experiencing problems have large market share (deposits and lending) Deposits in large instutions in danger – DGS cannot pay out quickly, the government is affected Fall in asset prices and changed consumption and investment patterns Significant deterioration in access to credit Significant impact on unemployment and GDP
3	Very serious/ system threatening	Market share of affected institutions substantial Large proportion of deposits not covered by deposit guarantee in affected institutions Loss of confidence in the financial system Government not able to intervene due to the size of the problem Substantial fall in asset prices and significant change in consumption and investment patterns Very difficult for households and companies to get new loans Dramatic increase in unemployment and major fall in GDP

Note. When assessing the impact on the real economy a number of relevant variables are used that provide a picture of the resilience of the real economy (for example the proportion of deposits covered by the deposit guarantee, public debt in relation to GDP, corporate and household debt and the size of a country's banking system). The analysis is complemented by an assessment of the consequences of the shock for several variables (fall in GDP, unemployment and a fall in housing prices).

Figure 3. Exposures to Cyprus December 2012
USD million
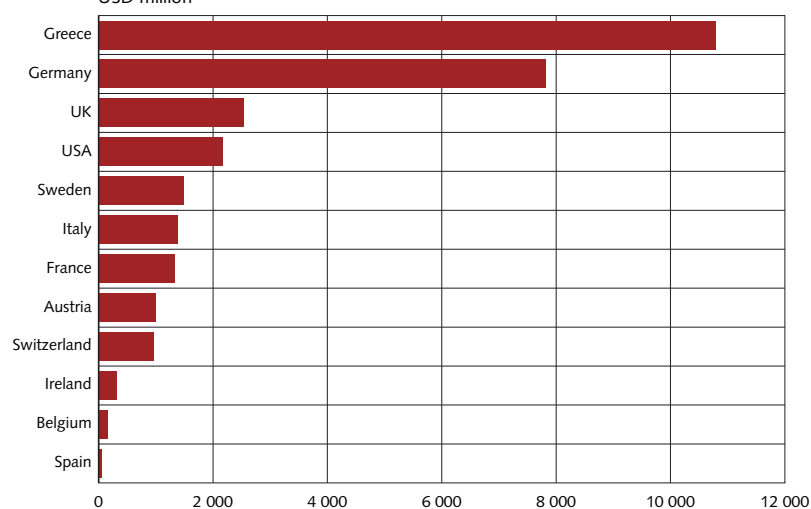
Source: BIS

Figure 4. Swedish stress index
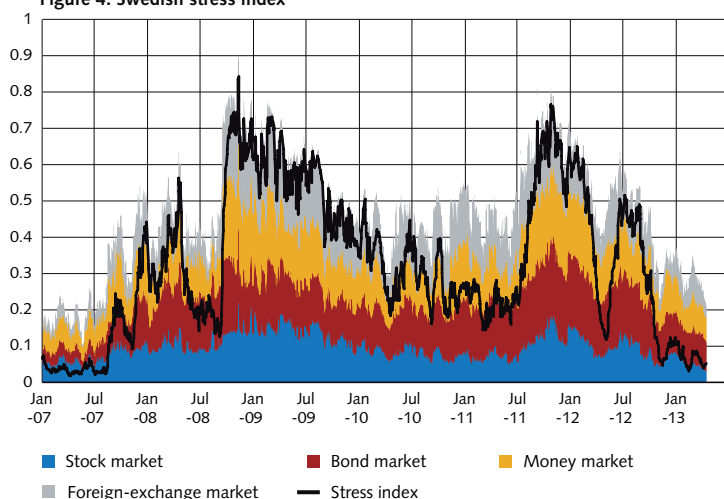
Sources: Reuters EcoWin, Bloomberg and Riksbanken

Table 6. Calculation of aggregate impact score: financial markets

MARKET	ASSESSMENT OF CURRENT SITUATION	IMPACT SCORE	BEST	WORST	WIDTH
Money market	1	1	0.5	1.5	0.5
Bond market	1	0.25	0	0.5	0.25
Stock market	1	0.75	0.25	1.25	0.5
The foreign-exchange market	1	0.25	0	0.5	0.25
Mean value		**0.5625**	**0.1875**	**0.9375**	**0.375**

Table 7. Calculation of impact score: financial institutions

INDICATOR	ASSESSMENT OF CURRENT SITUATION	IMPACT SCORE	BEST OUTCOME	WORST OUTCOME	WIDTH
Profitability	0	0.25	0	0.5	0.25
Capital adequacy	0	0	0	0.25	0.25
Liquid assets	0	1	0.75	1.25	0.25
Loan losses	0	0	0	0.25	0.25
Mean value		**0.3125**	**0.1875**	**0.5625**	**0.25**

Table 8. Calculation of impact score: financial infrastructure

INDICATOR	ASSESSMENT OF CURRENT SITUATION	IMPACT SCORE	BEST OUTCOME	WORST OUTCOME	WIDTH
General organisation	0.2		0	0.13	0.1
Awareness and management of business and operational risks	0.2	½*(0.067+0)	0	0.13	0.1
Transparency	0.2		0	0.13	0.1
					0.1
Mean value	**0.067***	**0.03**	**0**	**0.13**	**0.1**

Note. Only the areas not complied with are shown. In this example, we have chosen a weight of 0.2 for those principles awarded an impact score of 1 and a weight of 0 for the principles that are complied with. Thereafter the nine areas are equally weighted. * (0.067=0.6/9)

Table 9. Calculation of impact score: real economy

INDICATOR	ASSESSMENT OF CURRENT SITUATION	IMPACT SCORE	BEST OUTCOME	WORST OUTCOME	WIDTH
Resilience (x)	1.3	w*(x+y)+(1-w)*k	1.1	1.6	0.25
Change of state (y)	0.0		0.0	0.3	
Impact assessment (k)	0.0		0.0	0.3	
Results	**0.1**	**0.3**	**0.0**	**0.5**	

Note. w = weight.

Figure 5. Heat map for the risk scenario's consequences for financial stability and the real economy in Sweden