

DNR 2010-226-AFS



Swedish market participants' views of risks and the functioning of the Swedish fixed-income and foreign exchange markets

RISK SURVEY AUTUMN 2010

■ Swedish market participants' views of risks and the functioning of the Swedish fixed-income and foreign exchange markets¹

Participants in the Swedish fixed-income and foreign exchange markets assess that liquidity problems and a global economic downturn are the greatest risks to the Swedish financial system. Participants increased their risk propensity up to the beginning of November but, on the other hand, their assessment is that most sub-markets are functioning less effectively now than reported in the spring survey, especially the market for mortgage bonds. This is the conclusion of the Riksbank's risk survey, which was carried out at the end of October/beginning of November 2010.² There are mainly two reasons why the participants' assessment of the functioning of the markets differs compared to the survey in spring. Firstly, the spring survey was conducted before the sovereign debt problems in the euro area came into focus in May. Secondly, the current survey was conducted during the weeks immediately after the Riksbank's last large long-term loan matured on October 6. During these weeks, there were some disagreements in the short-term money market, which led to uncertainty regarding short-term interest rates. Both these factors may explain why market participants may sound less positive in the autumn survey.

The participants' views on the financial crisis and future developments

THE MAJORITY CONSIDER THAT THE FINANCIAL MARKETS HAVE NOT NORMALISED

Only 40 per cent of the respondents agree that the functioning of the financial markets has returned to normal. This can be compared with the risk survey in the spring in which 60 per cent considered the financial markets to be functioning as normal. What has changed since the spring is that concerns over the European sovereign debt problems have had a tangible effect on markets since May. In addition, since April the majority of the Riksbank's long-term loans (SEK 350 billion) have matured, thus the banks' liquidity reserves with the Riksbank have decreased. The banks therefore were required to clear their daily flows again in the interbank market.

Decreased liquidity in all markets in Sweden is the main reason the markets have not normalised, according to respondents. There was some volatility in financial markets in Sweden in October, as liquidity was being reprised after the Riksbank's phasing out of its extraordinary loan facility on October 6, according to respondents. Numerous participants state that the funding situation became more difficult at that time, as disagreement among banks over the routines in the overnight market led to increased funding costs. As the Riksbank's long-term loans had the effect of decreasing short-term interest rates in Sweden, it was not unreasonable to expect higher rates in the market after these loans matured. Some respondents agree with this, stating that the

1 With effect from spring 2008, the Riksbank has sent out a risk questionnaire twice a year to participants in the Swedish fixed-income and foreign exchange markets. The purpose of this survey is to obtain an overall picture of the view of risk in the markets and also to provide an idea of the views on the functioning of the markets. This report describes all of the results of the Riksbank's Risk Survey, where responses were received between 11 October and 5 November 2010. The Riksbank commissioned the survey company Markör to send out the survey on its behalf. The survey supplements the annual discussions the Riksbank has with its monetary and foreign exchange policy counterparties on developments in the financial markets, and the regular contacts with market participants. The spring survey was sent out to 89 participants active in the Swedish fixed-income and foreign exchange markets. The groups surveyed are the Riksbank's monetary and foreign exchange policy counterparties and active participants in these markets, both investors and borrowers. The total response frequency amounted to 76 per cent.

2 By the past six months/half year we hereinafter refer to the period April/May to October/November 2010.

RISK SURVEY AUTUMN 2010

volatility and higher rates in October were part of the normalisation process in the Swedish market. Volatility in the market has now decreased substantially from the time the survey was completed in the beginning of November.

Developments in global markets also had an effect on the responses to the question on the normalisation. New rounds of stimulus in the United States and continued support in Europe, are signs that the financial markets are still not functioning as normal, according to respondents. Uncertainty regarding future economic growth and sovereign debt issues remains and global financial markets are vulnerable to disturbances.

Most of those that responded that markets have not normalised believe that the situation will normalise within 1-3 years. However, some participants believe it will take even longer. A number of participants think it is difficult to define what is normal and think markets may never return to the state they were in before Lehman Brother's collapsed in 2008. Many also noted that the situation was not normal at that point either. As an example, credit spreads were very low before the crisis, which created imbalances. Therefore, the new normal levels can be expected to be above the pre-crisis levels.

The respondents believe the lasting effects of the financial crisis will be increased regulations with tighter credit conditions and decreased liquidity. This could have an effect on the potential economic growth rate. Several participants also respond that risk awareness and risk management have increased and that credit spreads will remain higher than before. Due to all of the above, they believe that funding costs will increase for market participants.

When asked about what will be in focus in the Swedish financial markets in the coming six months, a number of respondents mention liquidity, the funding situation and increased funding costs. The Riksbank's monetary policy will also be in focus in the coming six months, as well as the global economic development's impact on the Swedish economy.

The participants' views on risks to the Swedish financial system

LIQUIDITY PROBLEMS AND A GLOBAL ECONOMIC DOWNTURN ARE THE GREATEST RISKS TO THE SWEDISH FINANCIAL SYSTEM

Participants were asked to list the five risks that would have the greatest impact on the Swedish financial system if they were to materialise. The responses were then categorised by the Riksbank. The main risks mentioned have been categorised in Table 1.

Liquidity problem is the risk most mentioned by participants (52 per cent)³. In particular, they are worried about the liquidity situation in Swedish financial markets. In addition, they are concerned about how other central banks' phasing out of extraordinary measures and the sovereign debt problem in Europe will affect the liquidity situation in the future. According to some respondents, volatility and the temporary tension in the Swedish interbank market seen in October was due to the fact that the Riksbank phased out its extraordinary loan facility before the European Central Bank and the Federal Reserve have phased out their support measures. The volatility has then created pressures in other markets, such as the repo market, covered bond market, FRA's and the

³ The liquidity problems mentioned are various. They include concerns about the general liquidity situation (access to cash) with the phasing out of the central banks' extraordinary measures. There are also concerns regarding the liquidity situation in markets in terms of depth and spread in instruments and the willingness of market participants to do business with each other, for example. All of the liquidity problems mentioned fell into this category. Investors, borrowers and market makers all view liquidity problems as a great risk, although market makers mention it most often (71 per cent).

RISK SURVEY AUTUMN 2010

FX swap market, which in turn has had an impact on the funding situation and the funding costs of market participants.

An economic downturn was the second most mentioned risk as 51 per cent of respondents listed it.⁴ Many respondents are worried about how a global economic downturn will affect the demand for Swedish exports and the functionality of the Swedish financial markets, such as the Swedish covered bond market. Numerous respondents specifically mention a double dip recession in the United States as a risk, or even deflation.

The third most mentioned risk is the sovereign debt risk (39 per cent). It is especially apparent in Europe, although some mention this as a problem in the United States as well. Participants believe that second-round effects of the crisis in countries with large sovereign debt problems might have a negative impact on Sweden, as a member of the EU. The sovereign debt crisis might lead to a weaker Swedish krona, increased risk aversion and decreased liquidity in Europe. Problems may then spread to the banking sector in Europe, which they believe might ultimately have an impact on the Swedish banking sector.

Other risks widely mentioned are funding problems and increased funding costs (28 per cent), which are follow up risks to various other risks mentioned, such as new capital requirements for banks and decreased liquidity.⁵ Numerous respondents are worried about a currency war/protectionism globally (25 per cent), which has been discussed in markets recently. The concerns are that many countries are acting to prevent a too rapid appreciation of their currencies in order to stimulate exports and domestic economic growth.

A fall in property prices is another potential risk (25 per cent). Many participants discuss the risk of a substantial decrease in housing prices in Sweden and the resulting effect this could have on the Swedish economy. Financial institution distress (18 per cent) is also a concern, because many financial institutions in Europe and the United States are still vulnerable. The bankruptcy or distress of a financial institution could lead to a new banking crisis impacting the functionality of financial markets, just like the situation after the bankruptcy of Lehman Brothers in 2008.

New regulation is also a risk (16 per cent) according to a few participants. As an example, stricter capital requirements under the Basel 3 and Solvency 2 regulations can for example increase funding costs and decrease liquidity for market participants. Further new regulations are then possible, which could lead to overregulation.

The monetary policy development (15 per cent) is also viewed as a risk by some respondents.⁶ Participants (mostly market makers and borrowers) are worried about a too rapid increase of the repo rate by the Riksbank, although, a couple of respondents (mainly investors) point out that a too low repo rate can also be risky, causing problems for example for life insurance companies in Sweden. In this low interest rate environment, the solvency of life insurance companies is approaching the required minimum level that they are mandated to stay above to operate.

4 Investors (58 per cent) and borrowers (65 per cent) are more worried about an economic downturn than market makers (30 per cent).

5 Market makers (53 per cent) are by far the most concerned about funding problems or increased funding costs compared to investors (19 per cent) and borrowers (18 per cent).

6 Borrowers (24 per cent) see this as a bigger risk than investors (12 per cent) and market makers (12 per cent).

RISK SURVEY AUTUMN 2010

Low interest rates for an extended period of time in major economies in combination with global imbalances (15 per cent) may then create risks in the longer term, according to respondents.⁷ Asset bubbles might build up as investors search for yield on their investments. During 2010, there have been large capital inflows to emerging markets as these markets offer higher interest rates and have been growing faster than on average globally. Participants are worried that the situation could turn around; causing sudden outflows that could have an effect on global financial markets. An economic downturn and other problems in the Baltic countries are also seen as risks (13 per cent) that could have a negative impact on the Swedish banking system.

A smaller number of respondents mentioned problems with the functioning of the Swedish money market as a risk (13 per cent), which is directly related to the liquidity issues mentioned above. This is not surprising, as the survey was conducted during a period of higher volatility in the Swedish money market. According to some participants, the repo market has not been functioning normally and the costs of repo agreements in Sweden are higher than the costs on the euro market. A dysfunctional overnight clearing and deposit market, as well as increased bid/ask spreads in the interbank market are also stated as risks.

Table 1⁸ Risks that would have the greatest impact on the Swedish financial system and risks that are most difficult for institutions to manage according to respondents

	Risk with greatest impact	Risks most likely to be realised	Risks most difficult to manage
Liquidity problem	52%	31%	46%
Economic downturn	51%	30%	18%
Sovereign debt risk	39%	25%	7%
Funding problem/ funding cost	28%	25%	23%
Currency concern/protectionism	25%	13%	7%
Property price falls	25%	7%	11%
Financial institution distress	18%	13%	13%
New regulation	16%	7%	13%
Monetary policy development	15%	8%	7%
Low interest rates/global imbalances	15%	7%	-
Functioning of Swedish money market	13%	7%	-
Problem in the Baltic countries	13%	-	-
Increased risk aversion	-	8%	7%

The table shows the percentage of the respondents that cited each risk

7 Investors and market makers list this as a risk, while borrowers do not mention it. This makes sense as borrowers are probably happy to be able to borrow at low rates. Investors are thus the only ones who list quantitative easing as a risk, which comes with low rates.

8 Market participants were asked to list the five risks that they believe would have the greatest impact on the Swedish financial system if they were to materialise, then to list three risks that they believe are the most likely to be realised and finally to state the three risks that would be most difficult for their institution to manage. The responses were then grouped into categories by the Riksbank. The most mentioned risks can be seen in Table 1. Other risks mentioned that are not in Table 1 are, for example, volatility, terrorist attack, central banks' phasing out of extraordinary measures, political risk, equity risk, inflation and unemployment, credit risk, quantitative easing and increased Swedish household debt.

RISK SURVEY AUTUMN 2010

LIQUIDITY PROBLEM IS THE RISK MOST LIKELY TO BE REALISED AND IS ALSO THE MOST DIFFICULT RISK FOR INSTITUTIONS TO MANAGE

Participants were then asked to list the three risks to the Swedish financial system they believe are the most likely to be realised. Liquidity problem is not only the risk considered as having the greatest impact on the Swedish financial system; it is also the risk most likely to be realised (31 per cent), according to the participants. In fact, some state they were already experiencing this problem when they responded to the survey. As mentioned before, the participants responded to the survey at the time when there was increased volatility in the Swedish money market.

Almost one-third of the respondents said that they see a risk for an economic downturn. Funding problems/funding costs and the sovereign debt problem in the euro area are the third most likely risks to be realised (25 per cent). Further problems regarding sovereign debt in Europe could then lead to a collapse of the European Monetary Union, according to some participants (7 per cent), if some member countries were to decide to exit the currency cooperation.⁹ The risk view of participants is likely to have changed since the answers to the survey were received, as Ireland's sovereign debt and banking sector problems have been the main focus in financial markets in November. See the section on the risks viewed as the most likely to be realised in Table 1.

Participants were also asked to list the three risks that their institution would find most difficult to manage. Again, the liquidity problem (46 per cent) is considered by far the most difficult risk for institutions to manage, followed by problems they may have with funding and increased funding costs (23 per cent) and economic downturn (18 per cent). Some respondents say that the Riksbank might have to intervene if the Swedish short-term markets become dysfunctional due to the liquidity issues. See the section on the risks viewed as the most difficult for institutions to manage in Table 1.

In addition to their responses about risk, some participants mentioned that they are happy with the Riksbank's policy, stating that the phasing out of the extraordinary loan facility before the phasing out of support measures in the United States and Europe was done at the right time. They believe the Riksbank has communicated clearly with the market and that the exit did not come as a surprise. This is contrary to some other answers received, as mentioned above with regard to liquidity problems.

Risk propensity in the Swedish fixed income and foreign exchange markets

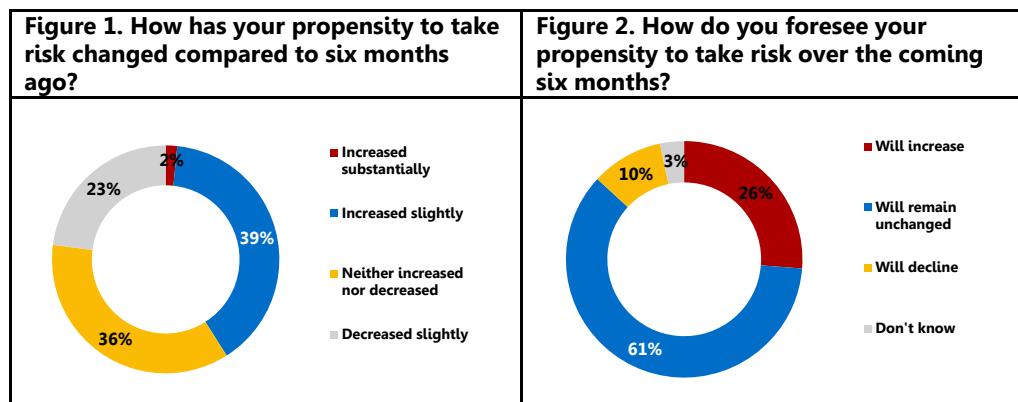
THE TREND TOWARDS INCREASED RISK PROPENSITY CONTINUES, ALTHOUGH AT A SLOWER RATE

Previous risk surveys indicate that risk propensity has been increasing among the participants since the financial crisis began to wane in 2009. Risk propensity has increased among 41 per cent of the participants in the last six months, which is a fall compared with the spring survey (50 per cent). When asked in the spring about their expectations regarding risk taking in the six months ahead, only 21 per cent believed they would increase their risk taking. Risk taking in the last six months therefore increased more than was expected by the market participants. 36 per cent neither increased nor decreased their risk propensity in the last six months, which could be an indication that they are back to their normal risk taking levels after the financial crisis. 23 per cent, on the other hand, have decreased their risk taking (see Figure 1). Turbulence in markets due to sovereign debt problems and volatility in Swedish financial markets in October are likely to have

⁹ Only investors are worried about a collapse of the European Monetary Union. Borrowers and market makers do not mention it as a potential risk.

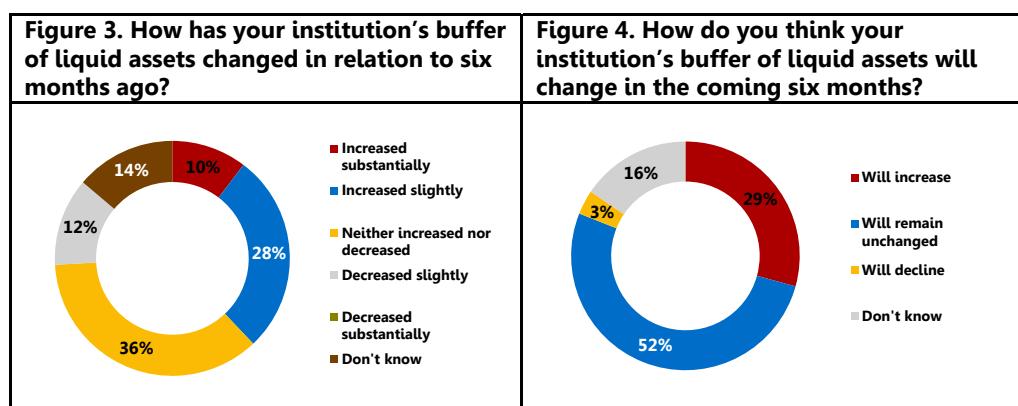
RISK SURVEY AUTUMN 2010

caused less risk taking by some. The majority of the respondents believe their risk propensity will be unchanged over the coming six months (see Figure 2).



PARTICIPANTS CONTINUE TO INCREASE THEIR LIQUIDITY BUFFERS

The need for liquidity buffers often increases in times of great uncertainty. A large percentage of the participants, or 38 per cent, state that their institution has increased its liquidity buffer in the last six months, despite an increase in risk propensity (see Figure 3). Only 13 per cent of the participants questioned in the spring believed they would increase their liquidity buffers in the coming six months, therefore liquidity buffers increased much more in the last six months than was expected. Turbulence and uncertainty in financial markets in the early autumn, as well as new regulations, may have impacted this decision. In response to the question on how the liquidity buffer will change in the coming six months the majority, or 52 per cent, say it will remain unchanged (see Figure 4).



Functioning of the Swedish fixed income market¹⁰

Market participants believe that the Swedish money and bond markets functioned well until the Riksbank's last large long-term loan matured on 6 October. According to the respondents, liquidity premiums have increased since then. They also report that there have been STIBOR¹¹

10 Only participants active either solely in the Swedish fixed-income market, or active in both the fixed-income market and the foreign exchange market, have responded to this part of the survey. The figures include only those who have been active in the specific segment.

11 Stockholm Interbank Offered Rate (STIBOR). The STIBOR fixing is the average (except for the highest and lowest offer) for the interest rates listed daily by selected banks in Sweden. Also, STIBOR is used as reference rate in interest rate agreements or for the pricing of derivatives.

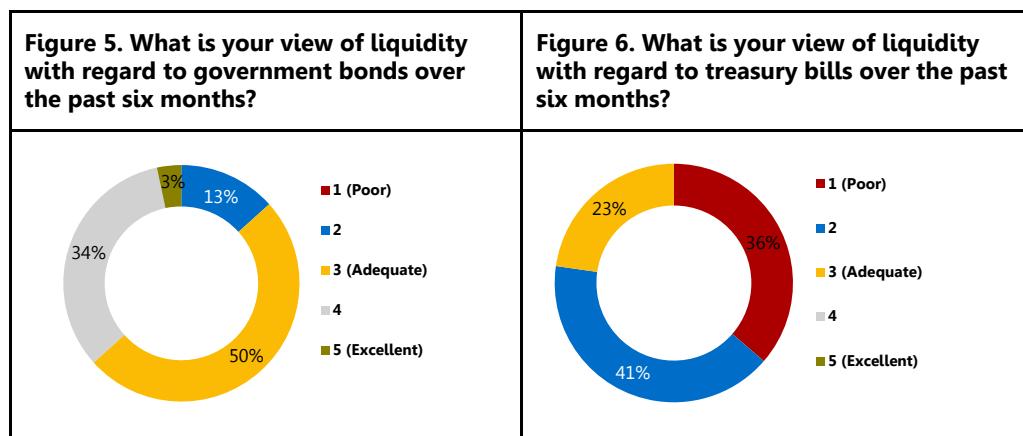
RISK SURVEY AUTUMN 2010

fixing problems, risk taking has declined and the repo market has not worked particularly well from time to time. Again, the fact that the answers are from the period when the Swedish market was the most volatile has a major effect on the answers. Some participants believe that some banks did not prepare for the Riksbank's phasing out the extraordinary loan facility and therefore were not ready to go back to the situation that prevailed before the crisis. Many respondents say that the liquidity in mortgage bonds is not good. The large balance of mortgage bonds held by market makers has had an impact on liquidity and pricing in the market. Decreased liquidity makes it hard to manage risk in investment portfolios. The market for government bonds has, on the other hand, functioned very well. Interest rate swaps and the corporate commercial paper market have also worked well, according to some respondents.

Participants most active in the money and bond market were then asked how they viewed liquidity (in terms of depth and spread) over the past six months in different fixed income instruments. This is interesting to look at, since many stated liquidity problems as the biggest risk to the Swedish financial system.

IN PRINCIPLE, LIQUIDITY HAS DECREASED IN ALL FIXED INCOME SUB-MARKETS

The assessment regarding liquidity in government bonds is that it has been better than in other fixed-income instruments. 87 per cent of the respondents state that the liquidity in government bonds has been adequate or better over the past six months (see Figure 5). However, this is not as good as in the spring survey, where 97 per cent said that liquidity had been adequate. Liquidity in treasury bills is still considered inadequate (see Figure 6). As indicated in earlier risk surveys, the liquidity in this market was considered relatively poor even prior to the crisis.¹²



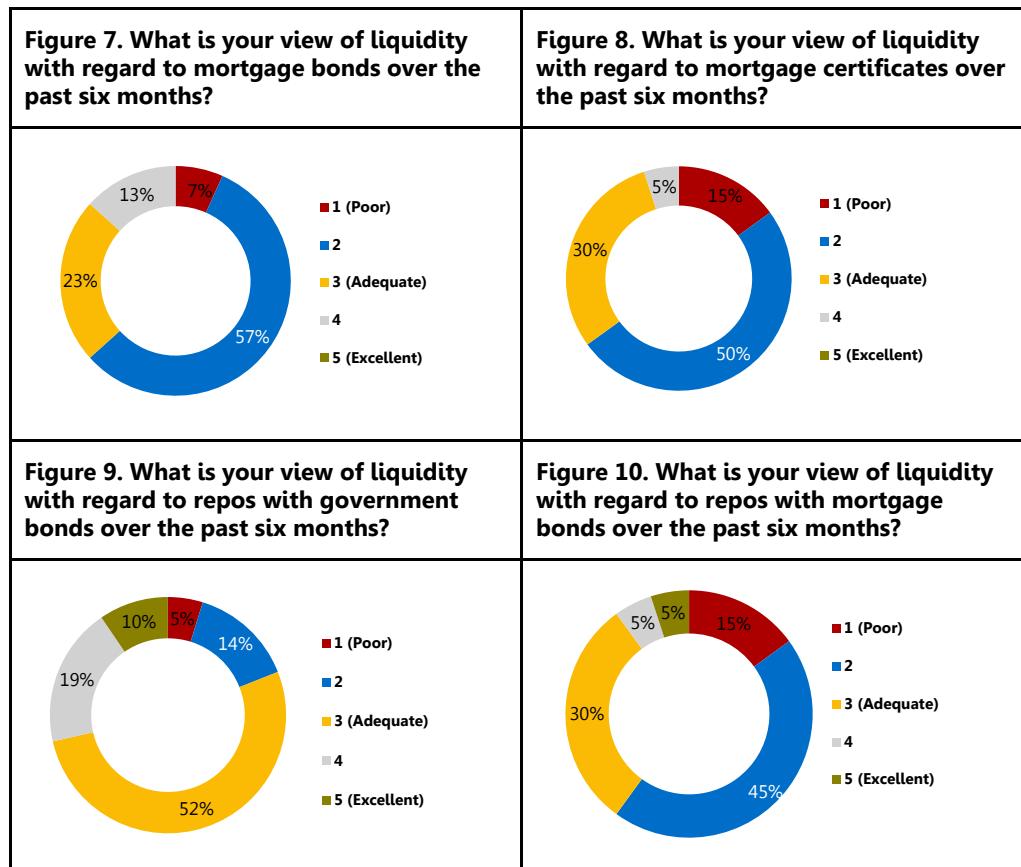
Liquidity in mortgage bonds is assessed to be substantially worse than in the previous survey. 64 per cent responded that the liquidity in the market has been less than adequate in the past six months, compared to only 15 per cent in the spring (see Figure 7). Again, this reflects the market participants' views on what happened after the Riksbank phased out its loan facility in October. Liquidity in the mortgage certificates market is also considered to have been more limited during the past six months than it was in the previous survey period (see Figure 8).

Liquidity in repo agreements with government bonds is considered adequate by 81 per cent, although the responses were more positive in the spring (see Figure 9). Liquidity in repo

¹² This could to a large extent be due to the fact that these securities by their nature are "buy and hold" investments. Another reason for the poor liquidity could be that the supply of treasury bills has been declining.

RISK SURVEY AUTUMN 2010

agreements with mortgage bonds is, on the other hand, considered less than adequate by 60 per cent of the respondents (see Figure 10).

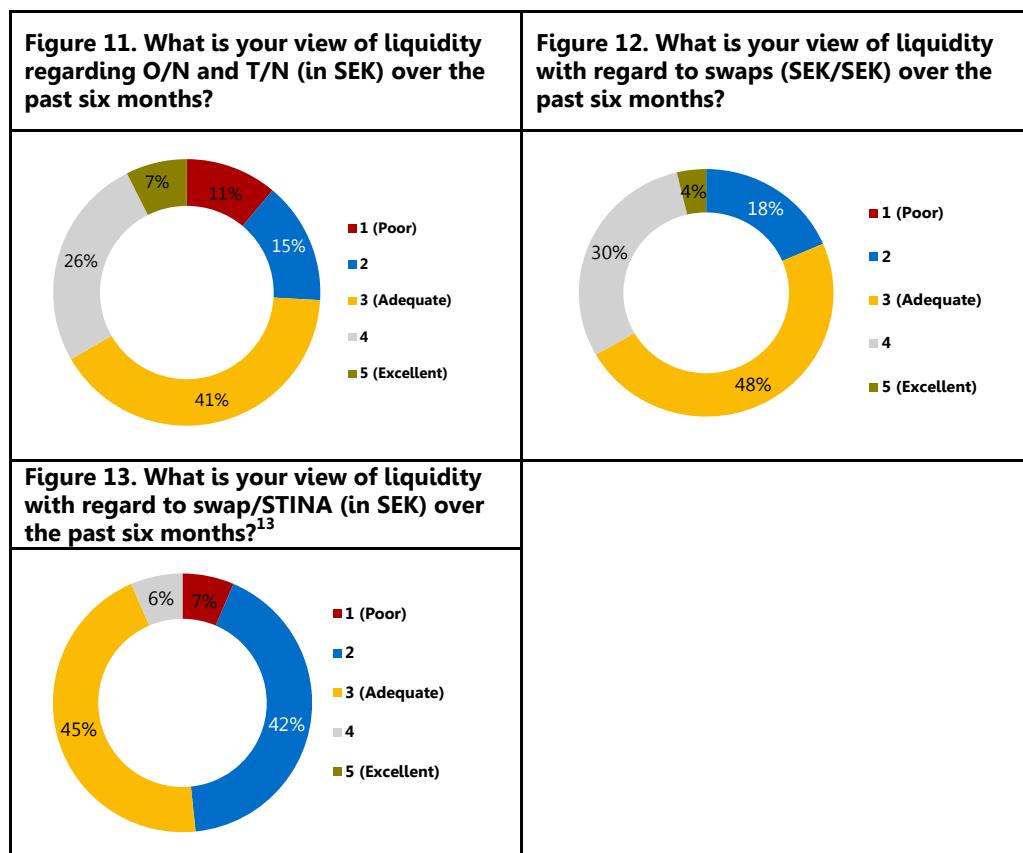


The liquidity in the shortest interbank market segment (overnight and tomorrow/next (in SEK)) over the past six months has been adequate according to 74 per cent of the participants. On the other hand, 26 per cent say that it has been less than adequate, reflecting the increased volatility in the market in October (see Figure 11).

With regard to the market for interest rate swaps (SEK/SEK), liquidity seems to be adequate according to 82 per cent of the respondents (see Figure 12), although liquidity was even better last spring.

Liquidity in STINA swaps has been adequate according to 51 per cent of respondents, while 49 per cent say it has been less than adequate (see Figure 13). Compared to the results in the spring survey, liquidity in STINA swaps has decreased substantially, as 78 per cent then said it was adequate. One reason mentioned for this is the increased volatility in the underlying tomorrow/next STIBOR fixing during October.

RISK SURVEY AUTUMN 2010



Functionality of different fixed-income products and other instruments used by the Swedish fixed-income market participants

In response to the question of whether there is any instrument that will be more important for the Swedish fixed-income market in the period ahead, a number of different instruments are mentioned. The participants believe that mortgage bonds and their financing and all kinds of swaps will become more important. Cleared repos and RIBA¹⁴ futures are other instruments that are mentioned. Treasury bills and government bonds are going to be of less importance, according to participants.

When assessing the Swedish STIBOR fixings over the last six months, participants say they have functioned well except in the window after the phasing out of the Riksbank's loan facility in October. Some say, on the other hand, that volatility is normal while the market seeks to establish a new equilibrium. According to some participants, the STIBOR fixings are often lower than the level actually traded on in the market. This can be a confidence problem for the market place.

When asked about the functioning of the SEK/EUR and SEK/USD cross-currency interest rate swaps, many participants state that they have not been working well. Prices were stated to be volatile after the phasing out of the Riksbank's long-term loans, although volatility has now decreased. There has been a one-way stream in the market, especially for longer maturities, as

13 Includes answers from participants active on both the fixed-income and foreign exchange markets. STINA stands for STIBOR T/N Average, which is an average rate for the shortest rate on the STIBOR market.

14 RIBA is a cash-settled futures agreement, specifically based on the Riksbank's repo rate. The contract base is a fictitious loan with a term corresponding to the period between two international money market (IMM) dates, with final settlement occurring against the average repo rate for the period concerned.

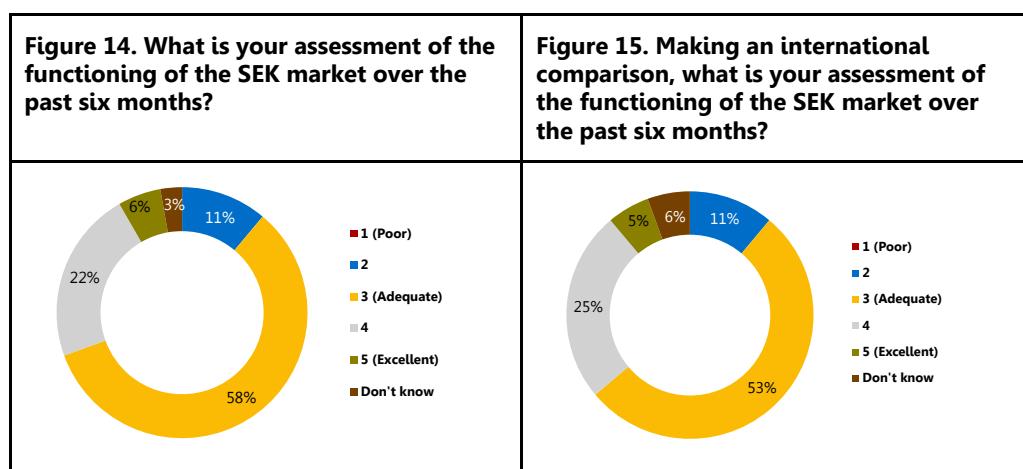
RISK SURVEY AUTUMN 2010

the demand for Swedish krona has increased. But the views differ and other respondents believe the market has worked well.

Regarding how the changeover from an over-the-counter (OTC) market to a central counterparty (CCP) clearing of repos via Nasdaq OMX Stockholm and how that will affect the repo market, many responded that this could help decrease the size of banks' balance sheets. Many also believe that the repo market will become more important, as counterparty risk decreases when trades are cleared through a CCP. Liquidity in the market could then increase and it might have a stabilising effect on the money market. Most participants view the change as very positive, although it has not affected prices yet¹⁵. Some respondents on the other hand do not see that the change from OTC to CCP will change much.

The functioning of the foreign exchange market¹⁶

A broad impression (86 per cent) among the respondents participating in the Swedish foreign exchange market is that the market has functioned adequately over the past six month (see Figure 14). However, in the spring survey a substantially higher percentage responded that the market was working better than adequately. In an international comparison, the foreign exchange market seems to be working well (see Figure 15), although a higher percentage in the spring thought it was functioning better than adequately in an international comparison.



According to the respondents, the market has been working well, but it is more vulnerable than in the spring. Smaller volumes than before are being traded because market makers have been pricing themselves out of bigger deals (higher prices), according to some respondents. Some respondents also state that the fall in excess liquidity in Swedish kronor, after the phasing out of the Riksbank's loan facility in October, has affected the market somewhat.

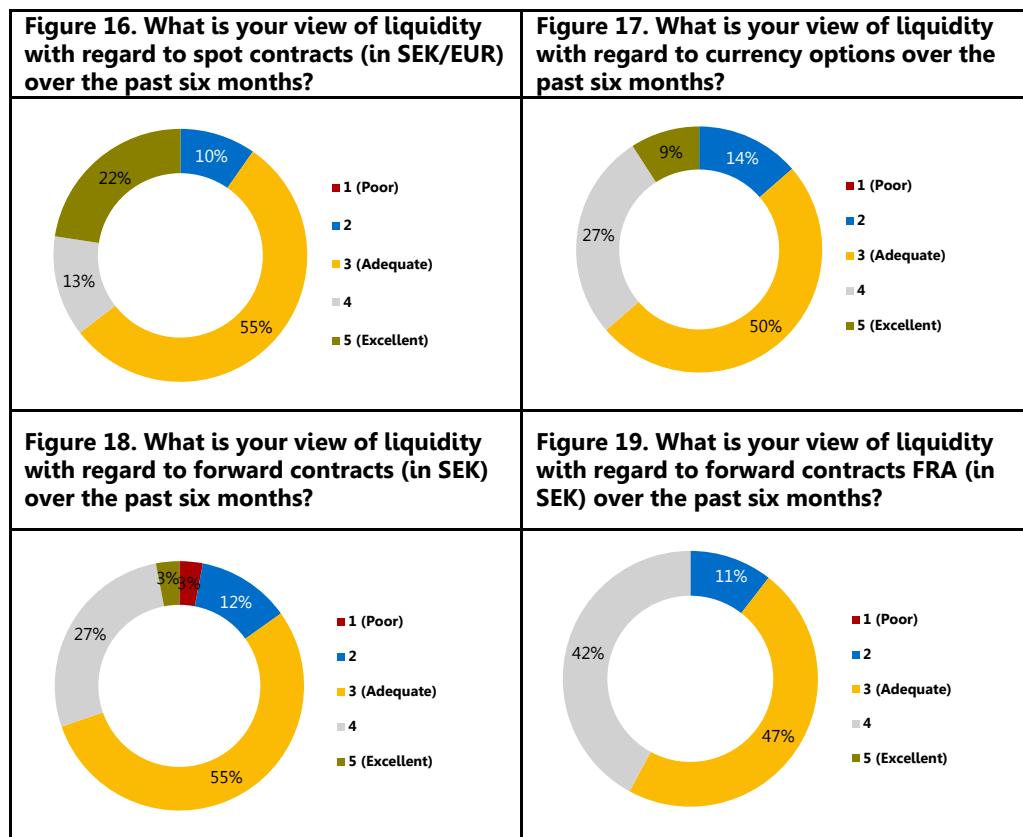
IN PRINCIPLE, LIQUIDITY IS GOOD IN THE FOREIGN EXCHANGE MARKET, ALTHOUGH IT HAS DECREASED

15 Nasdaq OMX Stockholm's central counterparty clearing for repos has not yet opened in full scale; there has been a gradual increase of participants and bonds that can be used in the repos. Nasdaq OMX Stockholm hopes that it can be used in full scale in the beginning of December.

16 Only participants active either solely in the Swedish foreign exchange market, or active in both the fixed-income market and the foreign exchange market, have responded to this part of the survey. The figures include only those who have been active in the specific segment.

RISK SURVEY AUTUMN 2010

Looking at the responses regarding liquidity in different foreign exchange instruments, the liquidity in the foreign exchange market is in general considered to be adequate, as can be seen in Figures 16-19. For all foreign exchange instruments on the other hand, fewer respondents answer that the market was working better than adequately than in the spring survey. It is therefore evident that liquidity has not been as good as it was viewed in the spring survey. For example, regarding the spot market, 49 per cent responded that liquidity was better than adequate in the spring survey, compared to 30 per cent in this autumn survey.



Finally, participants were asked what the most important trends in or changes to the Swedish krona market were in the last six months. Some said that it is positive how well the market has functioned after the phasing out of the Riksbank's loan facility, despite some volatility. The economic situation is considered to be good in Sweden and the market has strong fundamentals, which has helped the Swedish krona market in an international comparison.



Financial Stability Department
Sveriges riksbank, 2010