

# The Riksbank's business survey – a quick indicator of economic activity

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*Like several other central banks, Sveriges Riksbank conducts its own business survey. The aim of the survey is to gather up-to-date information as a basis for an assessment of the current state and development of the economy ahead of the publication of official statistics. The structure of the business sector in Sweden, with only a few predominant companies in each sector, makes it possible for the Riksbank to cover the development of a large part of the economy by primarily turning to these large companies. The companies' responses are also used to forecast the development of GDP.*

Various types of economic statistics form the basis for the Riksbank's assessments of the state of the Swedish economy, as well as for the forecasts on which the monetary-policy decisions are partly based. However, the time lag associated with these statistics means that they may sometimes be seen to be out of date at the time of publication. This applies, for example, to the data from the quarterly National Accounts, which is usually not available until two months after the end of the quarter concerned. Consequently, the Riksbank and other decision-makers need complementary data that provides a more up-to-date picture of the situation. The Riksbank's forecasting models therefore use flash statistics that reveal economic tendencies but are often not as detailed or complete as the official statistics. The Business Tendency Survey of the National Institute of Economic Research is one example of such flash statistics that provide an indication of the economic climate.<sup>1</sup> Various studies have also shown that the data in the Business Tendency Surveys is highly consistent with the overall economic statistics and that the companies' assessments of the outlook for the future in the surveys thus provide a valuable basis for assessments of the development of the economy.

Since 2007, the Riksbank has conducted its own business survey in order to complement the general economic statistics. The aim of the survey is to gather reliable information on the state of the economy, but also to provide an opportunity to discuss current economic issues that are of interest to our analysis with the companies.

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<sup>1</sup> The Business Tendency Survey of the National Institute of Economic Research is based on questions put to over 6 000 companies every month.

## MANY CENTRAL BANKS CARRY OUT THEIR OWN SURVEYS OF THE ECONOMY

Many central banks gather information on the current state and development of the economy through their own contacts with the business sector. Perhaps the most well-known business survey, the so-called Beige Book, is conducted by the regional offices within the Federal Reserve System in the United States.<sup>2</sup> This type of data collection is valuable because independent central banks can often get good information from the companies in the country concerned as they are usually not bound by the political decisions of governments, nor have any vested interest in the business development of individual companies. The questions about the development of prices and economic activity that are usually asked in the central-bank surveys also relate to factors that are important to the potential development and prospects of the companies. This makes it interesting for the companies to take part in the surveys and to study the results.

The methods the central banks use to collect the data vary. In some cases the central banks carry out extensive data-collection programmes that can complement other national statistics, either because these statistics are inadequate or unavailable, while in other cases the surveys are less formal in nature. The latter may, for example, apply on special occasions when the central bank believes that close contacts with the business sector are necessary to quickly collect and also communicate information on the economic situation.

## HOW THE RIKSBANK'S BUSINESS SURVEY IS CONDUCTED

In the Riksbank's business survey, the data is collected by carrying out in-depth interviews. This is one of the many qualitative methods for data collection used within a range of subject matter areas. Both qualitative and quantitative surveys measure the properties or characteristics of the subject of the survey in some way. Qualitative surveys often focus on the relationship between different conditions and on trying to find new aspects of them by adopting a freer approach to the issues that are to be investigated. In contrast to quantitative methods, which are used to collect data on the prevalence of certain properties,<sup>3</sup> quantitative methods are used to collect data on particular aspects of different properties. This may relate to causal relationships or to conceivable reactions to certain external circumstances, but also to discovering different points of view that one did not know existed or that were assumed to be irrelevant before the data-collection process began.<sup>4</sup>

Other qualitative methods apart from in-depth interviews include focus groups, text analysis and participatory observation. A common feature of these methods is that they search for relationships or properties that it has not been possible to describe or delimit in advance so that they can then be measured quantitatively. For example, it is often difficult

2 Other central banks that conduct business surveys include the Bank of England, the Bank of Canada, Norges Bank, the Swiss National Bank and the Reserve Bank of Australia.

3 The results of quantitative surveys, for example surveys of the level of support for political parties, are presented in the form of frequencies and distributions that can be calculated with a certain degree of accuracy for the entire population that the sample has been taken from.

4 See Starrin et al. (1991)

to quantify points of view about the future when aiming to clarify the contexts of which they form part. Focus groups are a method commonly used in market surveys where the aim is to understand how consumers view a new product or a new brand in relation to already existing products and brands.<sup>5</sup> In text analysis, one searches for statements but also for latent or underlying messages that are “hidden” in the text. Such text analyses are, for example, regularly carried out following general elections in Sweden. Participatory observation has often been used in studies of residential environments and so on.

#### QUALITATIVE RESULTS IN THE RIKSBANK’S SURVEY CAN APPLY TO ALL COMPANIES

Unlike the results of quantitative surveys, the results of qualitative surveys cannot be transferred from those studied to apply to an entire population using calculations in the form of statistical inference. This is not to say, however, that the results are invalid for the entire population. If this was the case, then it would not be possible, for example, to use a few focus groups, each made up of ten or so participants, to understand target groups consisting of thousands of intended purchasers.

The strength of the qualitative survey lies in the fact that it can help us to discover and understand various new aspects of a situation or to understand the assessments made by those interviewed. This distinguishes the qualitative survey from the quantitative survey in which the questions are set from the start and limited to aspects determined in advance. By using qualitative methods, one can collect a wider range of information. For example, a company executive may reason in a wide variety of ways about the appropriate action to take in certain circumstances. In a qualitative survey, these different lines of reasoning can be discussed on site with the executive concerned.

In its business survey, the Riksbank asks about aspects such as the development of economic activity and prices and tries to capture how the companies view these aspects and intend to act in relation to them. Although there may be many lines of reasoning in theory, in practice the number of options is limited. After a number of interviews, the addition of new aspects of the variables investigated therefore tends to decrease with each additional observation. The set of assessments and viewpoints associated with a certain point in time or situation in the economy thus usually becomes fairly stable already after a relatively small number of observations, such as is the case in the Riksbank’s business survey.<sup>6</sup>

#### THE BUSINESS SURVEY’S SAMPLE FOCUSES ON THE LARGER COMPANIES

The Riksbank’s business survey is conducted among companies that can be assumed to give multifaceted assessments of, in the first instance, the development of prices and economic activity. This means that it is particularly interesting to follow sectors in which

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<sup>5</sup> See Seymour (1992).

<sup>6</sup> See Glaser & Strauss (1967). In methodological terms one usually talks about “theoretical saturation” when additional observations confirm rather than alter the picture that has emerged so far.

fluctuations in economic activity are clear. Companies in the retail and manufacturing sectors are therefore overrepresented in the sample in relation to their share of the business sector as a whole, while the sample is limited among companies in the other services sector.

Due to the high degree of concentration in the Swedish business sector, a limited number of interviews cover a large part of the sector in terms of turnover and the number of employees. The ten largest groups account for approximately 35 per cent of the employees in the manufacturing industry, and in the retail sector the degree of concentration is even higher: the three largest companies account for approximately 45 per cent of the number of employees. Several other sectors, such as construction and road and rail transportation, are also dominated by a few major companies.

Since September 2007, the Riksbank has interviewed 25 to 60 companies of importance to the Swedish economy three times a year. The interviews have been conducted ahead of the monetary-policy decisions that are accompanied by the publication of Monetary Policy Reports. The sample has partly been the same every time, but as different issues have arisen from time to time it has been appropriate to interview companies that have been particularly affected by various events in the economy on these different occasions. However, the core of the sample has always consisted of the largest companies, which in this case are defined as the companies with most employees in Sweden in the respective sectors. In total, about 300 companies have been interviewed over the course of five years.

At present, 45 companies are normally interviewed in May and September and 25 companies in January. The number of employees that the interviewed companies have in Sweden varies between 200 000 and 300 000 at the time of each survey, which constitutes 6 to 8 per cent of the total number of employees in the Swedish business sector.

#### THE QUESTIONS CAPTURE THE DIRECTION IN WHICH THE ECONOMY IS MOVING

The interviews are conducted with the help of an interview guide containing questions on the companies' views on economic activity, production, employment, the development of prices and other issues that the particular survey wishes to gather information on.<sup>7</sup> In the case of international companies, information is primarily sought on their Swedish operations. The questions in the guide are phrased as direct questions, but they do not have to be put verbatim. The important thing is that the interviewers get answers to their questions and that the issues are fully covered in the interview, as the main purpose of the survey is to obtain in-depth information on how the companies perceive the current situation and how this affects their planning. The interviewers code the responses in accordance with the scale attached to each question, usually in terms of shifts such as "better" and "worse", or "unchanged". These "quantitative" questions are accompanied by straight-forward, more qualitatively-oriented questions such as "why?". The analysis of

<sup>7</sup> The interview guide is the tool that the interviewers use during the interviews and contains the questions to be covered during the interview and advice and instructions for the interviewer. An example of the interview guide is presented in the Appendix.

the interviews that the interviewers compile in a summary of each interview is therefore as important as the coding of the questions.

#### THE RIKSBANK'S OWN STAFF CARRY OUT THE INTERVIEWS

It is natural for the Riksbank's own staff to conduct the interviews as the issues to be addressed can change quickly from one survey to another. The responses also need to be analysed and compared with other internal assessments made at the Riksbank. The issues investigated during the surveys are also such that the interviewers need to have a good grasp of both macroeconomics and the way that companies work so that they can, for example, ask relevant follow-up questions.

However, when the survey began in 2007, the Riksbank lacked methodological experience of how to carry out surveys of this kind; there was no corps of interviewers or any other similar group that had special training in the skills required to conduct surveys. To establish whether the Riksbank would be able to conduct its own survey, a pilot survey was therefore carried out which demonstrated that the Riksbank was in fact well able to perform the survey using its own staff. The experience gained during the pilot survey is now used in the introduction that new interviewers are given ahead of the first survey they take part in, and any new experience gained during the course of the surveys is also used in the introduction. More than 50 economists at the Riksbank have now acted as interviewers over the five years in which the survey has been conducted.

#### THE RESULTS ARE REPORTED QUICKLY

The interview guide lists the questions to be asked and describes how the interviews themselves should be conducted. The interviews are recorded unless the interviewee objects to this, which is very unusual. The recording is an important aid to the interviewer who should write a summary of the interview within two days. The summaries are read within two days by the editorial group that writes the survey report and any queries that arise are resolved between the group and the interviewer and, in some cases, by contacting the company again.

The editorial group meets four to five times during the period of the survey and the overall result of the survey emerges during the course of their work and is summarised in the report that is then published. Each survey begins with a meeting at which new questions and particularly important aspects are discussed with the interviewers, and when the interviews have been completed the interviewers are gathered together for a debriefing at which the experience from the interviews is discussed.

In this process, the individual responses from each of the companies are weighed together to form an overall picture of how the companies view the economic situation and how they intend to act on the basis of this view.

## GREAT INTEREST IN PARTICIPATING IN THE BUSINESS SURVEY

The Riksbank's business survey has provided quick and useful information despite the fact that it is based on a relatively limited amount of data. This may partly be because Swedish business, as mentioned earlier, is very concentrated, with several sectors that are dominated by large companies.

In general, the Swedish companies are also interested in participating in the survey. They are accommodating and willing to provide information, and very few decline to take part. The quality of the information they provide is also consistently high and the interviews are usually carried out directly with members of the company's management. The value of the information we get from the interviews is therefore high already under normal conditions, but the information is particularly useful in the event of rapid changes in the economy.

## THE RIKSBANK'S BUSINESS SURVEY IS RELIABLE

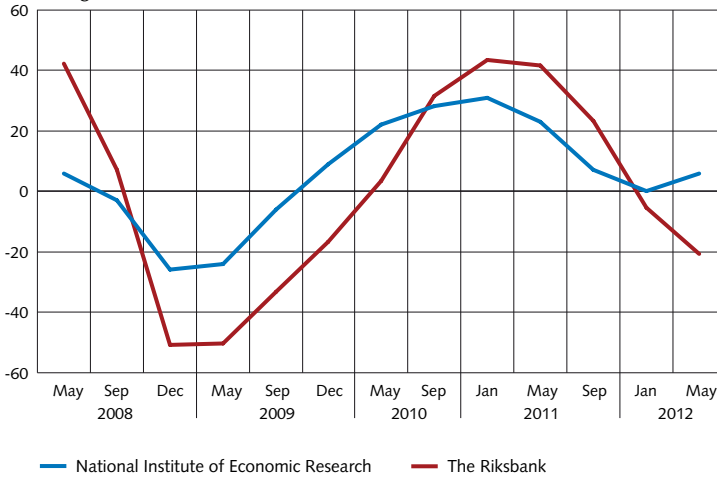
The results of the Riksbank's business survey can be compared with those of the Business Tendency Survey of the National Institute of Economic Research. This is because it is partly the same companies that are interviewed. The response distribution for similar questions in these two surveys can also be calculated in the same way thanks to the quantitative coding that is carried out alongside the qualitative analysis.<sup>8</sup> A comparison with the Business Tendency Survey can thus indicate how reliable the results of the Riksbank's business survey are.<sup>9</sup>

Figure 1 shows how the companies perceive the economic situation according to the Riksbank's business survey and the Business Tendency Survey's confidence indicator. There is a close correspondence between the two series and both reach their trough in December 2008 and their peak in January 2011. One difference is that the Riksbank's time series varies more than the time series in the Business Tendency Survey. A possible reason for this is that the Riksbank's business survey focuses on companies that are sensitive to fluctuations in economic activity and is based on fewer companies, which means that each individual response may have an impact on the results.

8 As the size of the participating companies varies significantly in each survey, the companies' responses are weighted in terms of the number of employees they have in Sweden.

9 The questions in the two surveys are not identical. The Business Tendency Survey's confidence indicator is based on responses to three different questions, but in both cases the surveys aim to measure the "situation in" or the "state of" the business sector. The National Institute of Economic Research interprets the confidence indicator as a "measure of the situation" while the Riksbank's business survey interprets its responses as a "measure of economic activity" which should thus make the responses comparable.

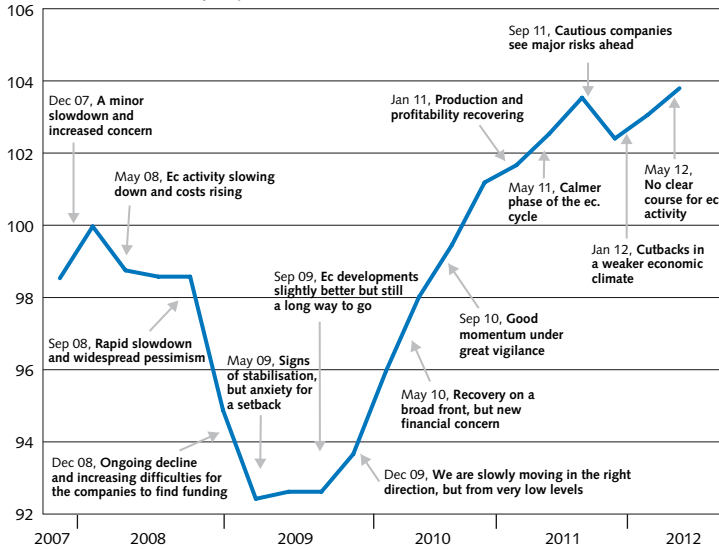
**Figure 1. The economic situation according to the Riksbank's business survey compared to the confidence indicator of the National Institute of Economic Research Net figures**



The Riksbank's analysis of the companies responses and their assessments of the economic situation is summarised after survey in a published report. The headings in each report express the most important results in condensed form. Another way of assessing the reliability of the information that comes from the Riksbank's business survey is therefore to compare the headings in the reports with the development of Sweden's GDP. Figure 2 shows the headings and the development of GDP at the time each report was published. The comparison between the assessments expressed in the reports' headings and the development of GDP show that the survey has provided information that successfully captures the future development of the economy at an early stage.

**Figure 2. Report headings in the Riksbank's business survey and the development of Sweden's GDP**

GDP level, seasonally-adjusted data, index 2007 Q4 = 100



It is particularly interesting that the analysis in the business survey captured the downturn in the autumn of 2008 at an early stage, and thereafter also the turnaround in 2009. The headings in the surveys in September and December 2008 were “Rapid slowdown and widespread pessimism” and “Ongoing decline in economic activity and increasing difficulties for the companies to find funding” respectively. These were the messages communicated in early October 2008 and mid-January 2009, although it was not until the end of February 2009 before the dramatic fall in GDP during the fourth quarter of 2008 was fully confirmed by the official statistics.

However, it can also be noted that the report headings include events in the economy that are not automatically captured by the development of GDP. For example, financial unease and access to funding were highly important factors which affected the operations of the companies and characterised their responses during the period studied. Profitability, prices and the supply of labour are other factors that are perhaps not directly captured by the development of GDP.

**AN INDICATOR OF ECONOMIC ACTIVITY THAT PREDICTS THE GDP OUTCOME**

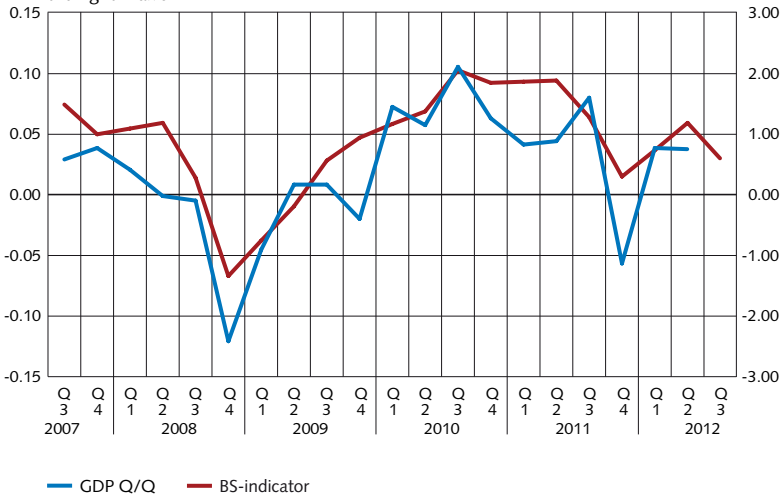
The questions in the business survey that are coded quantitatively are used partly to support the qualitative analysis and partly to calculate a quantitative indicator of economic activity. Most of the questions in the survey relate in one way or another to the development of economic activity. By weighing together the eight questions in the survey that have been asked from the start, we produce an indicator of economic activity that reflects the expected development better than a single question does. The questions used



to produce this indicator relate to production volumes and employment (preceding three months and next three months), investment plans six months ahead, current profitability, the development of productivity up until the time of the survey and the expected development of prices in the coming year. Their weight in the indicator is determined by the ability of the respective questions to predict changes in GDP from quarter to quarter. The indicator's covariation with the quarterly change in GDP is presented in Figure 3.

**Figure 3. Indicator of economic activity based on the Riksbank's business survey (BS-indicator) in comparison with quarterly changes in Sweden's GDP**

The indicator's index on the left Y axis and GDP's quarterly percentage changes on the right Y axis



Note: R2 = 0.84.

There is a strong covariation between the indicator and the development of GDP, as expressed by the correlation coefficient of 0.84 and as illustrated by the curves in the graph, which follow each other relatively closely. What the figure does not show is the time difference between the calculation of the indicator and the publication of the GDP outcome. During the quarters in which the survey is conducted, the indicator is calculated up to two months before the outcome is published. This means that it is possible to paint an early picture of the development of economic activity on the basis of the Riksbank's business survey.

THE INDICATOR IS USED TO CALCULATE QUARTERLY FORECASTS FOR GDP

A third way of assessing the reliability of the business survey is to compare the forecasts for GDP produced with the help of the indicator with the results provided by the Riksbank's forecasting models. Forecasts of the change in GDP from quarter to quarter have been produced on the basis of the indicator since the third quarter of 2008.

Forecasting models can be assessed by ranking the forecasting errors that the models have made in the form of mean absolute errors (MAE) and the root mean square error

(RMSE). A comparison of the quarterly forecasts from the business survey with a weighted mean forecast from the various forecasting models shows that the survey's forecasts hold up well. Both the MAE and the RMSE are smaller in the business survey's forecasts than in the mean forecast, and they are also smaller than in the individual models from and including the third quarter of 2008 up to and including the second quarter of 2012. The difference between the MAE and the RMSE is also small in the business survey's forecasts, which means that these contain few significant forecasting errors. The reliability of the forecasts based on the indicator of economic activity in the business survey is thus relatively high.

#### THE BUSINESS SURVEY IS AN IMPORTANT ELEMENT OF THE RIKSBANK'S POLICY WORK

The business survey is now an established part of the monetary policy analysis at the Riksbank. Its results are highly reliable and are regularly reported in the media. The results are also noted by analysts that monitor the work of the Riksbank.

An important result of the work with the business survey is that the Riksbank has gained a greater understanding of the actions taken by the companies in different phases of the economic cycle. Information on the complexity of different markets and changed company strategies has also helped to increase our analytical skills. This may relate, for example, to understanding how exchange-rate hedging takes place or how funding has changed as a result of the financial crisis. Our experience underlines the fact that it is important to have direct contacts with the business sector in order to better understand changes in the workings of the economy and the behaviour of the players concerned. The flexibility of the survey means that it can also provide a basis for the Riksbank's other assignments apart from monetary policy. This is illustrated, for example, by the in-depth questions about the companies' funding situation that were asked during the financial crisis and that aimed to give the Riksbank a better understanding of the workings of the financial markets in a crisis situation.

The Riksbank's business survey is under constant development and several lessons have been learned during the five years in which it has been conducted: an effective internal organisation for the survey has been set up in which the interview and analytical skills of those involved are constantly improving. The number of companies interviewed is growing and the addition of new companies helps to build up the information bank. The emphasis of the recurring questions in the interviews shifts in line with the current economic situation, and specific questions are asked when this is called for. Extensive and detailed material from the survey has been compiled over the years and many different types of analysis can be performed on the basis of this material in addition to the reporting that is carried out today. The interviewed companies can also be seen as a network that can be used for the mutual exchange of information between the Riksbank and the business sector in more or less formal ways.

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## Appendix

### THE INTERVIEW GUIDES – AN EXAMPLE

The interview guides contain the questions that the interviews aim to get answers to. The answers emerge from the discussion that an in-depth interview entails, which means that the answers often come up without putting the questions directly. Some central questions are, however, formulated as direct questions in the guides so that they can be simply put in the specified way if the answers that emerge in the ongoing discussion are unclear. The responses to these core questions are coded by the interviewer on what is usually a three-point scale of the type increased – unchanged – decreased.

The guides also contain instructions for the interviewers. These may relate to appropriate follow-up questions, aspects that the interviewer should pay special attention to and so on.

The guides differ slightly depending on which of the four sectors, that is manufacturing, construction, retailing and other services, that the Riksbank's business survey is directed at. The general questions about economic activity, production/sales, sales prices and so on are the same for all sectors while, for example, the question about stocks is not put to service companies.

The interview guide presented in this Appendix was used for interviews in the manufacturing sector in May 2012. The instructions to the interviewers have been removed for reasons of space.

**1 a) What is your assessment of the current economic situation for your company?**<sup>10</sup>

Good...                                      Satisfactory...                                      Poor...

**b) What is your assessment of the economic situation for your company in six months' time?**

Better...                                      Unchanged...                                      Worse...

**c) What risks might the economic situation entail for your company?**

**d) How great are the risks from the economic situation now?**

Greater than normal      Normal                                      Lower than normal

**2 a) How has the production volume developed over the past three months compared with the previous three months (seasonally adjusted)?**

Increased...                                      Unchanged...                                      Decreased...

**b) How do you expect the production volume to develop over the coming three months compared with the previous three months (seasonally adjusted)?**

Increase...                                      Unchanged...                                      Decrease...

<sup>10</sup> Questions about the current economic situation have been included in the business survey since the round of interviews in May 2008.

**c) What is your assessment of the company's stock of finished goods at present?**

Too large                      Just right                      Too small

**3 a) How have orders developed over the past three months compared with the previous three months (seasonally adjusted)?**

Increased...                      Unchanged...                      Decreased...

**b) How do you expect orders to develop over the coming three months compared with the previous three months (seasonally adjusted)?**

Increase...                      Unchanged...                      Decrease...

**4 a) How has employment developed over the past three months compared with the previous three months (seasonally adjusted)?**

Increased...                      Unchanged...                      Decreased...

**b) How do you expect employment to develop over the coming three months compared with the previous three months (seasonally adjusted)?**

Increase...                      Unchanged...                      Decrease...

**c) What is the size of your staff in relation to demand/production?**

Too narrow                      Just right                      Too broad

**5) How does the company currently view the capacity to manage an (unexpected/expected) increase in demand?**

No problems...                      Some problems...                      Major problems...

**6 a) How much do you expect wage costs (per hour and including employer's contributions) to increase during the next 12 months?<sup>11</sup>**

Increase more than before...                      As much as before...                      Increase less...

**b) What is your assessment of the wage drift (i.e. wage increases over and above central wage agreements) for the next calendar year?**

Increase...                      Unchanged...                      Decrease...

**7) How do the company's investment plans for the coming six months look (compared with the previous six months)?**

Increased...                      Unchanged...                      Decreased...

**8) How has the company's access to external funding changed over the past quarter?<sup>12</sup>**

Improved...                      Unchanged...                      Worsened...

**9) What is your assessment of profitability at present?**

Good...                      Satisfactory...                      Poor...

<sup>11</sup> The questions regarding the development of wage costs and wage drift have been included since the round of interviews in May 2008.

<sup>12</sup> The question on access to external funding has been included since the round of interviews in September 2008.

**10 a) How do you intend to change your sale prices?**

Current quarter (in relation to previous);	Lower	Keep unchanged	Increase
Coming quarter (in relation to current);	Lower	Keep unchanged	Increase
Coming 12 months (in relation to now);	Lower	Keep unchanged	Increase

**b) Which of the following factors will drive prices upwards or downwards in the coming 12 months?** (Demand, spare capacity<sup>13</sup>, material costs, labour costs, development of productivity, changes in margins,<sup>14</sup> other)

**11) How has productivity (level) developed in your company over the past six months compared with the previous six months?**

Fallen...	Unchanged...	Risen...
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**12) How quickly does a change in the exchange rate have an impact on your sales prices?<sup>15</sup>**

0-3 months...	3-6 months...	6-12 months or longer...
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<sup>13</sup> Spare capacity is not relevant to all companies.

<sup>14</sup> Trade margins or equivalent.

<sup>15</sup> The question regarding the impact of exchange rate changes was introduced in the survey in December 2008.