Nils Bernstein: Statistical challenges due to the economic and financial crisis

Speech by Mr Nils Bernstein, Governor of the National Bank of Denmark, at the Nordic Statisticians Meeting, Copenhagen, 12 August 2010.

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Thank you for inviting me to speak here today.

Statistics are the basis for all empirical economic analysis and for our understanding of past events. Moreover, statistics are key to the formation of our expectations of what will happen in future. Both areas have given us considerable challenges in recent years.

The global economy is just recovering from the most serious recession since the war. It started out as a financial crisis that escalated into an economic crisis. The period has seen strong fluctuations in key economic fundamentals such as asset prices, interest-rate spreads, gross national product and world trade, to mention but a few.

I'm not saying that more statistics could essentially have turned the tide of events. More likely, we failed to fully understand the statistics that were on the table. A case in point is the interplay between the financial and real sides of the economy. The development has shown that we have quite a lot of work to do.

Danmarks Nationalbank is very much involved in this work, as regards both the production of statistics and analysis of the data collected.

I'll mention four areas that have seen improvement in recent years of the statistical basis for analysis of the correlations between the financial and real sides of the economy.

Since the turn of the year, Danmarks Nationalbank and Statistics Denmark have published coherent quarterly national accounts for the financial and non-financial sectors. This framework makes it possible to paint a consistent picture of the Danish population's income, consumption, savings, investment and borrowing. Actually, the nature of the figures is not new.

The novelty is that they are placed in a consistent framework to enable better analysis and, for instance, a better understanding of cyclical developments. Since 2007, the European Central Bank has published coherent quarterly national accounts for the euro area as a whole. The Danish national accounts statistics therefore provide a better basis for international comparison.

The statistics show that until 2008, both households and companies in Denmark built up their financial balance sheets via increased borrowing.

This has led to more pronounced financial exposure of households and companies alike. The increased borrowing has financed both higher financial investment and a growing net financing requirement, reflecting real investment in excess of savings. In 2008, the tide turned, and borrowing by both households and companies fell back.

The expansion of the financial balance sheets has led to more exposure to financial market developments. In turn, this has increased the interplay between the financial and real sides of the economy. Moreover, it influences the transmission of monetary policy to the real economy.

My second example is Danmarks Nationalbank's new lending survey. It saw the light of day in early 2009 with the 4th quarter of 2008 as the first observation. The lending survey represents qualitative statistics that provide information on the underlying factors and the development in lending by banks and mortgage-credit institutes. The survey was launched at

just the right time. For instance, it helped us in our assessment that the crisis has not given rise to an outright credit crunch in Denmark.

Many other countries, including the euro area, publish lending surveys, just as the USA has published them for many years. Experience shows that lending surveys are useful for many purposes.

My third example of Danmarks Nationalbank statistics is unique to Denmark. It is based on the fact that a considerable part of the payments in the Danish retail sector are transacted using the Dankort – the widely used Danish debit card. Since 2005, Danmarks Nationalbank has used Dankort payments as the basis for a quick estimate of retail sales, which constitute a major element of private consumption. Dankort payments are available on a weekly basis – almost a month ahead of retail sales data. Despite considerable variation over the year and week, experience shows that our Dankort model provides important and quick input for estimates of retail sales. This is useful in our ongoing cyclical monitoring.

In addition to the Dankort-model we are working on the use of taxcollection data – that is data for VAT- and income tax revenues and employer contributions – to create indicators for the real economy. This is work still in progress.

My fourth and last statistical example is a new, and hopefully improved, model for estimating the "direct investment income" item on the balance of payments. This item has often been significantly revised, which has generated uncertainty about the preliminary current-account balance. Other countries are struggling with the same problem. The novelty is that the compilation method now includes data on the expected economic development. We hope that this will provide for better estimates of gross movements in the balance of payments and make it even more useful for analysis purposes.

Moreover, Danmarks Nationalbank's increased statistical activity has been strengthened by the recent amendment of the statutory basis that allows Danmarks Nationalbank to collect statistical information independently for purposes such as macroprudential work, meaning the interplay between the real economy and the general health of the financial sector. It will further more be possible for the Nationalbank to use the collected data for individual respondents in its general work and thus not only for general statistical purposes. This work will be strengthened considerably in the coming years in cooperation with the Danish Financial Supervisory Authority and international players such as the ECB and the new European Systemic Risk Board.

Several of the new statistical measures were too late to be of any essential use in the analytical work during the crisis. Hopefully they can contribute to a better understanding of the crisis and perhaps to preventing similar crises in the future. Looking ahead, the point of interest is how to improve the identification of economic imbalances with negative consequences for growth and employment. This area is also in focus at the international level.

The International Monetary Fund (IMF), the Bank for International Settlements (BIS) and others have constructed indicators of economic imbalances. But their usefulness remains to be seen.

The observation, that it is not only necessary to have more data, but certainly also to achieve better analysis of the data available, as illustrated by the Danish banks' accumulation of a large customer funding gap – or "the deposit deficit" as we call it. The customer funding gap means that the banks did not have enough deposits to cover the strong expansion of lending, forcing them to turn to the international money and capital markets. This is no problem as long as the markets are functioning smoothly. But the banks will be more exposed, if the markets are not functioning smoothly, as evidenced during the crisis. We knew the figures, but underestimated the risk.

The most recent figures show that the customer funding gap is widening again. But this presents a bit of a dilemma. As we have seen, it increases the vulnerability of the financial

system. On the other hand, we are also keen to prevent tighter lending policies from resulting in a credit crunch.

The quarterly national accounts, play the leading role in Danmarks Nationalbank's assessment of cyclical developments. What is required here are timely, accurate and reliable compilations. The lesson we are learning at the moment is, that countries with unreliable – or downright incorrect – statistics will be punished by the markets. Not necessarily gradually, but often abruptly. The punishment is downgrading of the sovereign debt, resulting in substantial widening of interest-rate spreads.

An economic cycle is defined on the basis of real GDP. Compilation of GDP is not an easy task, especially not in a small, open economy like Denmark, even in calm periods. But during the crisis, we were way off the mark. One of the Danish government's policy measures was to allow companies to postpone VAT payments in order to strengthen their financial position. This had the unfortunate consequence, that no national accounts were published in the depth of the crisis. The result was great uncertainty about Denmark's exact cyclical position. Of course, we can never know the future. We can only partially know the present, thanks to indicators. But the situation was that even part of the past was unknown.

This situation impeded the basis for economic policy-making. I'm not criticising Statistics Denmark; I'm merely outlining some of our recent problems with statistical timeliness.

It was also difficult to obtain a clear picture of employment, and to a lesser extent unemployment.

Employment is compiled as an integral part of the national accounts, among other methods, but in recent years we have seen very substantial revisions of the data releases. In a cyclical assessment context, this is bad news.

Another consequence has been that it is difficult to obtain reliable data for labour productivity in the private sector. This is a key element in macroeconomic analysis in general, but unfortunately it is also a rather elusive element. Productivity has played a key role in the Danish debate in recent years in view of the item's weak development over many years. Or, at least, this is what the official figures show. Productivity determines a society's affluence in the long term, which makes it a key concept. It is not so easy to get to the bottom of our poor performance. We use a lot of money on the important productivity enhancing factors, but do we use the money in the right way?

Compilation of productivity in the public sector presents a particular problem since the sector's output is not sold at market terms. I know that this area is being looked into. This is particularly important to Denmark where public-sector output accounts for more than one quarter of the economy.

Unemployment is compiled in a separate system outside the national accounts. There are two compilations – an "official" and a sample-based compilation. They show very different levels, 114,000 and more than 200,000, and also different patterns. This difference is explicable to a large extent, but it still contributes to confusion in the public debate. However, a positive feature is that gross unemployment statistics are now compiled, meaning statistics for unemployment including people in activation schemes.

I think it is worthwhile to consider a new and more comprehensive publication of our unemployment statistics. With the aim of giving a more nuanced picture of the unemployment situation and a higher degree of comparability internationally.

Danmarks Nationalbank prepares forecasts for the Danish economy. The frequency will be increased from semi-annually to quarterly releases.

Forecasting the future is a great challenge, which multiplies many times if the point of departure is not even known, as illustrated by the revisions of the supply balance and employment. Naturally, this is not an isolated Danish phenomenon, although the Danish

quarterly national accounts tend to be more volatile than those of the major economies. This is also the case in other small, open economies.

There is one aspect of forecasting that I haven't mentioned yet – psychology. How can it be measured and modelled? Well, that is next to impossible, I think. Nevertheless, it still applies that psychology plays a very large role, and also did so during the most recent crisis. The total freeze of the financial markets after the collapse of Lehman Brothers was strongly driven by psychological factors.

This can also be said about consumer behaviour in the wake of the financial crisis. Consumers have kept, and are still keeping, their purse strings tight, despite solid growth in disposable incomes. Consequently, psychological factors contributed to the crisis spreading from a purely financial crisis to a full-blown economic crisis.

This mechanism can also be observed in the housing market. Regular questionnaire surveys are conducted in Denmark as regards household expectations of house prices in the years ahead. There is a high correlation between household expectations and the actual development. But it may be problematic that the exact present position is subject to uncertainty also in this area. One contributing factor is the considerable lag of house price statistics from Statistics Denmark.

Over the summer, prominent economists have debated fiscal policy in the Financial Times. One school advocates easing of fiscal policy on the grounds that the economies are still too fragile to stand on their own two feet. The other school advocates fiscal tightening on the grounds that increased indebtedness will only make the households hold back. Again, this is a question of psychology and expectations: will the households realise that the debt that is increased today has to be repaid with interest later, and will they also realise that they have to start saving up now for the higher future tax payments? This is a central question in economic policy, but we're basically without a clue when it comes to finding out what applies.

Constant focus on the relevance of the statistics released is a challenge for the producers of statistics. There will always be demand for more statistics, but then reality and budget constraints kick in. Consequently, it may be necessary to cut down on some statistical areas in order to increase focus on other and more relevant statistics. It is quite a challenge to become constantly better at optimising the use of the available data sources. A case in point is the challenges of registering the growing output in the services sector in a modern economy and capturing Internet activity.

Statistics must be accurate and preferably timely in order to be useful. Crises, especially financial crises, often erupt suddenly and sometimes surprisingly. This is a great challenge for economic statistics as they are only available with a certain lag.

Moreover, the crisis we have just been through was way out on the periphery of the probability distribution. We have not seen the financial markets react as dramatically and globally over the last 60 years as they did during the most recent financial crisis. This undermines the belief that we could have predicted the crisis if only we had had more statistics. For an unprecedented situation it is, of course, no use analysing historical data, believing that you can predict the crisis. The problem was more likely our failure to understand fully the available data. We must become better at understanding the interplay between the financial and real sides of the economy. A lot of research seeks to incorporate the financial sector into theoretical models of the real economy. And we have a long way to go in this area as well.

Consequently, there is no risk that statisticians will be out of a job right away!

Thank you for your attention.