

DANMARKS NATIONALBANK

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Nowcasting models help to monitor the economy

New tools for assessing the economy

During the corona crisis, Danmarks Nationalbank has implemented new tools for its ongoing monitoring of the Danish economy. These include models for nowcasting gross domestic product, GDP, growth. Nowcasting models are advanced statistical models that process a wide range of key economic indicators and real-time indicators as they are released. The models include figures for employment, unemployment, inflation, house sales and a number of other key economic indicators as they are released. That way, the models can produce nowcasts of GDP growth for the current quarter.

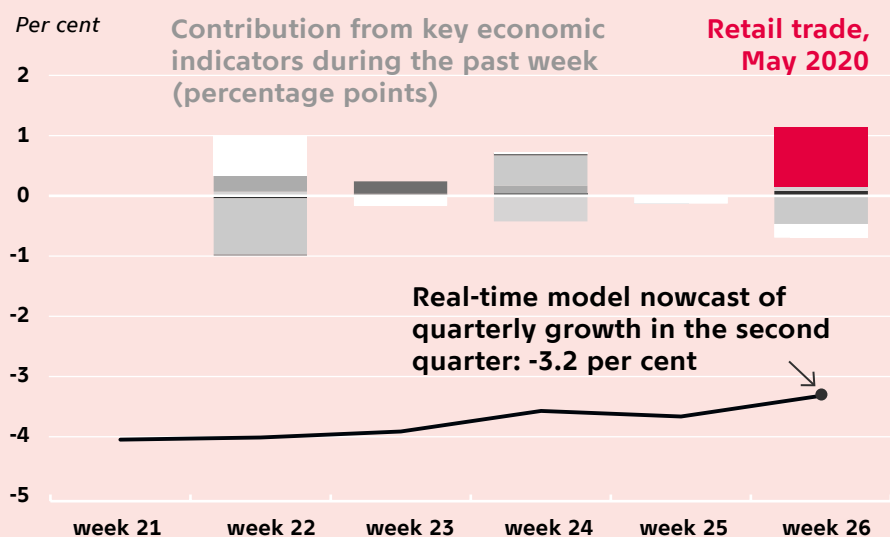
Several central banks have implemented nowcasting models to obtain updated figures for economic

growth. The model results do not represent Danmarks Nationalbank's growth forecast, but illustrate the information that key economic indicators can provide on GDP growth on an ongoing basis. The model calculations are included in the economic growth assessment work along with many other factors.

The models include Danmarks Nationalbank's *real-time model* and *turning point model*. The model nowcasts of GDP growth are updated weekly and will be posted on Danmarks Nationalbank's website ([link](#)).

The real-time model uses a large dataset with a wide range of key economic indicators and real-time indicators. Danmarks Nationalbank's real-time model is

Retail trade increased GDP estimates in week 26



Source: Danmarks Nationalbank.
Note: The chart shows model results from Danmarks Nationalbank's real-time model.

a customised version of the model developed by the New York Federal Reserve. The turning point model has fewer key economic indicators, but indicates the probability of various outcomes. The turning point model is ongoing work in partnership with the European Central Bank, ECB, and it helps to identify potential economic turning points more quickly.

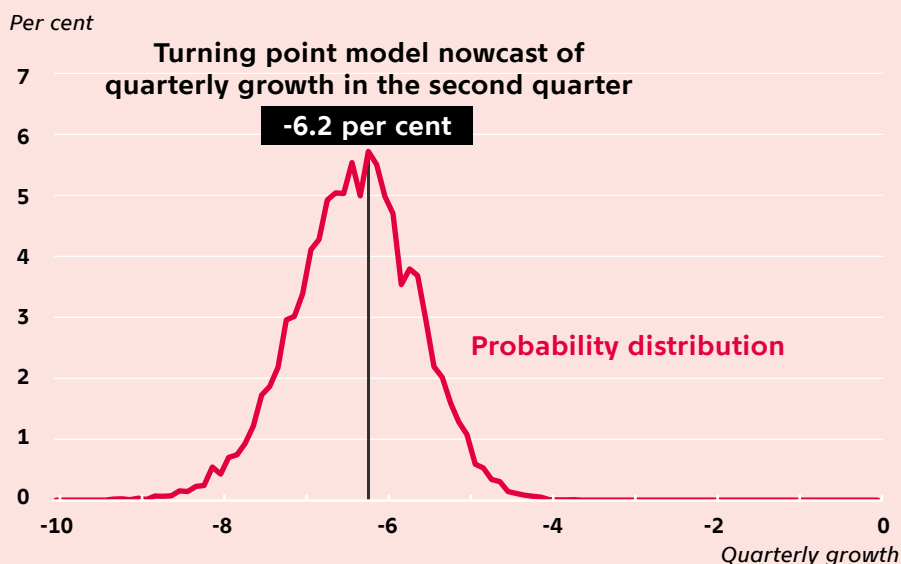
In other words, the methodological starting points of the models differ, but they share the same purpose: providing ongoing information about economic growth in the current quarter.

In week 25, the real-time model indicated a 3.6 per cent contraction in GDP in the 2nd quarter compared with the 1st quarter. In the following week, the model indicated a 3.2 per cent contraction. Positive retail turnover figures were the primary explanation for the change.

In week 26, on the other hand, the turning point model indicated a 6.2 per cent contraction in GDP in the 2nd quarter. The model shows that there is a predominant probability that GDP may contract by between 4 and 8 per cent.

From the beginning of August, the model results can be followed on Danmarks Nationalbank's website, and during autumn background material will also be posted, describing the model in more detail.

Predominant probability of further contraction



Source: Danmarks Nationalbank.
Note: The chart shows model results from Danmarks Nationalbank's turning point model.

PUBLICATIONS



NEWS

News offers a quick and accessible insight into an Analysis, an Economic Memo, a Working Paper or a Report from Danmarks Nationalbank. News is published continuously.



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WORKING PAPER

Working Paper presents research projects by economists in Danmarks Nationalbank and their associates. The series is primarily targeted at professionals and people with an interest for academia. Working Paper is published continuously.

The news article consists of a Danish and an English version. In case of doubt regarding the correctness of the translation the Danish version is considered to be binding.

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