BOX B: FORECASTS ON A "MOST LIKELY" BASIS – THE MEANING OF THE BUDGET PROJECTIONS

The MoU requires the Council to assess the appropriateness of Department of Finance forecasts "…. as most likely projections". This makes explicit — for the first time — the basis of the Department of Finance's macroeconomic forecasts and provides useful information about how to interpret and evaluate the forecasts.

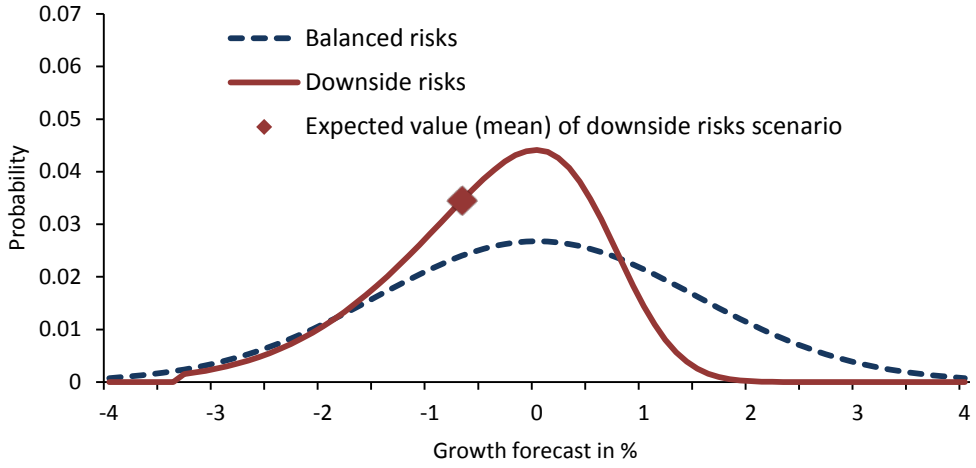
Given the volatility of the economy and the effect of unforeseen shocks, economic forecasts are inherently uncertain. A complete forecast would, therefore, give a range of outcomes with their corresponding probabilities. This could be expressed as a probability distribution, as the Council regularly shows through fan charts. However, projections are typically made and reported as a single figure. This requires a choice of a number to summarise the central tendency of the forecast distribution.

"Most likely" (modal) projections refer to the outcome with the highest probability of occurring, irrespective of where this is on the probability distribution. By contrast, a common alternative assumption is to make an expected-value forecast, i.e., the average of each possible outcome weighted by its probability. In many cases, including previous Department of Finance projections, the basis of the forecasts is not explicit.

Most-likely and expected-value forecasts can be identical or similar in many cases, for example, if the distribution of outcomes follows a Normal distribution.

However, there may be substantial differences if the distribution of risks is skewed. For example, Figure B1 shows the probability distribution for two different forecasts. The most likely outcome in both cases is zero growth. With balanced risks around the forecast (blue line), the expected-value forecast is also for zero growth. By contrast, for a forecast with risks tilted on the downside (red line), the expected-value forecast is -0.7 per cent.

FIGURE B1: COMPARISON OF A BALANCED AND SKEWED FORECAST DISTRIBUTION



Note: Both forecast distributions have a mode of zero and a standard error of 1.5, which is equivalent to the one-year ahead forecast uncertainty in the Council's fan charts.

Are most-likely forecasts "conservative"? This depends on the distribution of risks. If downside risks predominate, the most-likely forecast is not conservative because it effectively places no weight on low probability, high impact events. By contrast, if risks are on the upside, the most-likely forecast — which will be lower than the expected-value — could be viewed as a conservative approach.

The Stability and Growth Pact requires Stability Programmes to be based "...on the most likely macro-fiscal scenario or on a more prudent scenario". The "most likely" forecasting approach embodied in the MoU effectively rules out making forecasts that are deliberately more prudent than the modal forecast.

However, from the viewpoint of setting policy, it is important to know the balance of risks, as well as the most likely forecast as these could affect the policy stance. For example, the Budget documentation includes an explicit statement of economic risks. When downside risks predominate, policymakers might want to build buffers in the public finances through policy decisions to protect against bad outcomes.

The Council's endorsement of *Budget 2014* covers the set of macroeconomic projections for 2013 and 2014, including GDP but also a range of components and other variables. Focusing on a set of variables is justified because the budgetary projections depend both on GDP and a range of other components, such as consumption for VAT or household incomes for income tax. Furthermore, a soundly-based forecast needs to be internally consistent in terms of the projections for different items, given the accounting relationships and economic links between different variables. The relevant set of forecasts includes the main expenditure components of GDP, the balance of payments, incomes, the labour market and prices.[10] The Council pays particular attention to those variables that have the greatest impact on the public finances.

In addition to the quantitative aspects of the forecast, the Council's approach to endorsement takes account of other elements, including the methodology used and the soundness of judgements involved.[11]

As set out in the MoU, the "provisional final" forecasts provided to the Council for endorsement do not include the impact of specific discretionary tax and expenditure measures included in the

[10] The MoU specifies "The set of key variables taken into account in the endorsement will cover those published in the Budget and the Stability Programme and will include, inter alia: (i) real and nominal aggregate GDP and GNP changes; (ii) changes in major expenditure components (nominal and real), namely, personal consumption of goods and services, gross domestic fixed capital formation, net expenditure by central and local Government on current goods and services, exports of goods and services, and imports of goods and services; (iii) the current account of the balance of payments; (iv) factor income and average wage compensation, employment and unemployment; and (v) HICP inflation and the GDP deflator".

[11] See IFAC, 2013a, Section 1.5.