The thesis regarding output gap estimation is divided into two sections. The first part evaluates the latent potential output of euro area since 1998. The emphasis is put on the inquiry of usefulness of such estimates. The main findings resulting from this analysis are that, while ex-post assessment of potential output can serve as an effective tool for description of economy's behaviour in the past, the estimates evaluated in real-time are surrounded by huge amount of uncertainty which causes them to be of low reliability. For example, when searching for a structural break in the development of potential output, estimates of all models lay in one year range suggesting it to happen approximately at the end of 2007. On the other hand, the directions of output gaps evaluated at the end of real time data vintages were the same only 60% times. The second part of the thesis concerns with applicability of output gap estimates to inflation forecasting. The results show very little or no added value of such predictive modelling as autoregressive models of inflation perform comparable or significantly better forecasts for the euro area in medium and short term.