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The CBBH publishes the potential GDP and GDP gap estimates for BH for the first time

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Key messages

- *Using the estimation methodologies which are standard for most central banks, especially in countries with similar levels of development, the CBBH has estimated the potential GDP and GDP gap for the historical period, since 2008, and the current medium-term projection horizon. Estimates according to different methodologies are consistent, which we consider a sign of their reliability, while the official one is methodologically comparable to the estimates for the EU member states.*
- *According to our first official projections, potential GDP growth has not accelerated significantly in almost two decades. The average historical growth rate of potential GDP, for the 2008-2024 period, is estimated at 2.4%. We currently estimate that the annual growth rate of potential GDP in 2025 is 3.6%. At this potential GDP growth rate, and our projection of real GDP growth, the GDP gap is slightly negative (-0.1% below the projected real GDP). With the average potential GDP growth rate of 3.5% over the medium-term projection horizon, and our real GDP growth projection for the same period, we expect the GDP gap to close slowly.*
- *The aggregate capital level has had a key role in the potential GDP growth, but we estimate its contribution will decrease in the long-term horizon. The labour factor is already recording a decreasing contribution due to demographic changes and the challenges which BH is facing in the labour market. Consequently, given the current circumstances, in long term, we expect a slight slowdown of potential GDP growth.*
- *The currently estimated growth rate of potential GDP is not sufficient for long-term sustainable growth and stronger real convergence towards the EU. Structural reforms in the labour market, including those that stimulate stronger engagement of inactive working-age population, combined with measures for increasing productivity, have significant potential to increase the long-term growth of potential GDP in BH.*
- *We plan to publish estimates of potential GDP and GDP gap annually, with the spring round of medium-term macroeconomic projections. For purposes of transparency, and also strengthening applied analytical research, we will soon publish a technical paper, with the features of potential GDP estimate model.*

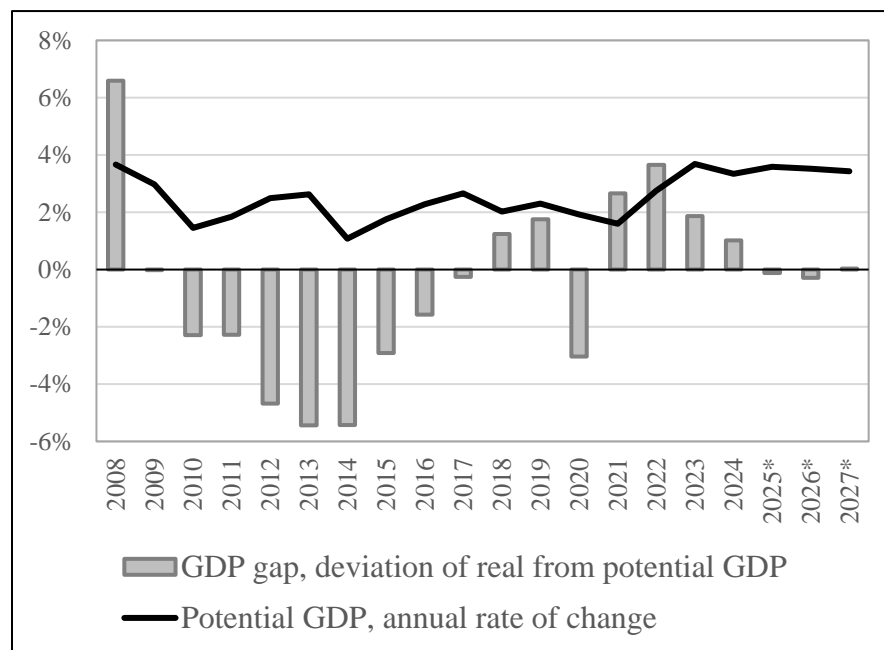
With the aim of more efficient calibration of monetary, and all other public policies, better fulfilment of the country's obligations in terms of analytical reporting in the EU integration process, and stimulating applied economic research, the Central Bank of Bosnia and Herzegovina (CBBH) publishes the first model estimate of potential GDP and GDP gap. The used methodologies are standard for most central banks, especially in countries with similar levels of development. The potential GDP and GDP gap have been estimated for the historical period, since 2008, and the medium-term projection horizon. The estimates obtained by applying different methodologies do not differ significantly, which we consider a sign of their reliability, to the degree possible for such economic concept. The estimate which we publish as official is intuitive compared to the estimates for the EU member states published in the AMECO database.

The CBBH estimates that potential GDP growth has not accelerated significantly for almost two decades (Graph 1). The average historical annual growth rate of potential GDP is 2.4%, for 2025 it is estimated at 3.6%, and the average for the current projection horizon is 3.5%, according to the European Commission production function model. Our currently estimated, official levels of potential GDP, growth rates of potential GDP, and estimated GDP gap are included in a separate file

https://ec.europa.eu/economy_finance/publications/economic_paper/2014/pdf/ecp535_en.pdf).

The currently estimated growth rate of potential GDP is not sufficient for long-term sustainable growth and stronger real convergence towards the EU. Despite this, we can see that the potential growth in BH in the recent period is obviously higher than the growth in the EU.

Graph 1. Official, model estimated growth rate of potential GDP and GDP gap



Source: CBBH * Projection horizon

The results of the model estimates suggest that capital accumulation was the main component of potential growth. In such circumstances, changes in productive fixed investment would be expected to bring about positive changes in production capacity and generally strong economic growth. However, the capital contribution has been estimated to be decreasing in the long-term projection horizon (the standard medium-term one currently ending in 2027), which can be partly attributed to the level of capital input which is unsustainable in long term. In addition, the relatively high capital growth rates from previous years, reflected in the official statistics on the total investments, as a rule, are not maintained for several successive years. The exceptions are episodes of strong structural changes, accompanied by strong, productive investment from private and public sectors. In addition, both economic theory and indicators of other countries point to the fact that the capital to GDP ratio cannot grow in long term, but must stabilise after several years of strong capital accumulation.

The labour contribution is continuously decreasing in the projection horizon, becoming negative in long term. With regard to the constraints related to demographic trends, maintaining the

potential GDP growth at the current level will require a significant increase of the overall productivity of the factors of production. Structural reforms in the labour market which will increase the participation of the working-age population, combined with measures to increase productivity, have significant potential to raise the long-term growth of potential GDP in BH. These reforms are also a precondition for better use of the EU development funds. Without the materialisation of these positive factors, a slowdown of potential GDP growth can be expected as early as in medium term. Consequently, in short term, the economy may exceed the potential due to periodic impulses from the domestic or international environment, but in long term, the pace of convergence towards developed countries is slowed down additionally.

The GDP gap is a difference between actual and potential GDP, and is an indicator of the economy's cyclical position. Our official estimate of the GDP gap for 2025 is -0.12%, and the average for the projection horizon is -0.13%, with slight closing towards the end of the projection horizon. The relatively small GDP gap indicates that the economy is moving close to its potential level, without visible signs of overheating or slowing down within the projection horizon.

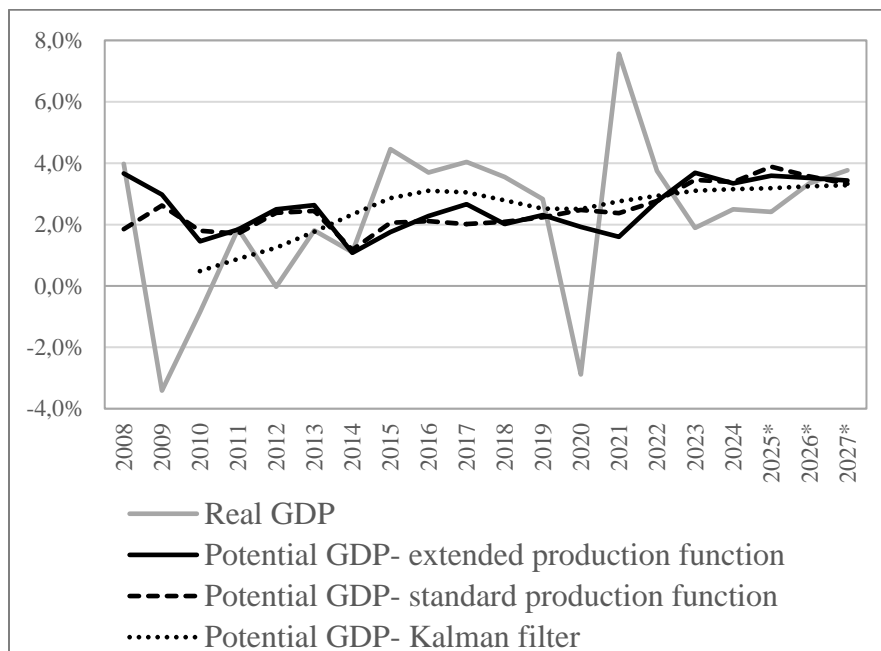
In order to assess the stability of the model estimate of potential GDP, three methodological approaches have been used, which is in line with the practice applied by other countries. Also, the specific features of BH economy have been taken into account, in order to obtain a more realistic and relevant perception of the country's real capacities. When assessing the country's economic potential, unique structural features are taken into account that directly affect its potential: demographic structure, labour market, technological development, institutional framework, and external environment. Graphs 2 and 3 below show the estimated growth of potential GDP and the GDP gap, using three models:

- The standard production function, representing one of the most commonly used methods and is based on the economic principle of the long-term sustainability of the use of the basic production factors: labour, capital and technology;
- The European Commission's extended model of production function, which is used for a consistent and structural estimate of potential GDP of the EU member states. This method differs from the standard production function only in the way of estimating the structural unemployment rate, which better reflects the labour market dynamics, and;

- The Kalman filter model, which was used as an additional stability test for the results obtained by applying the standard and extended production functions.

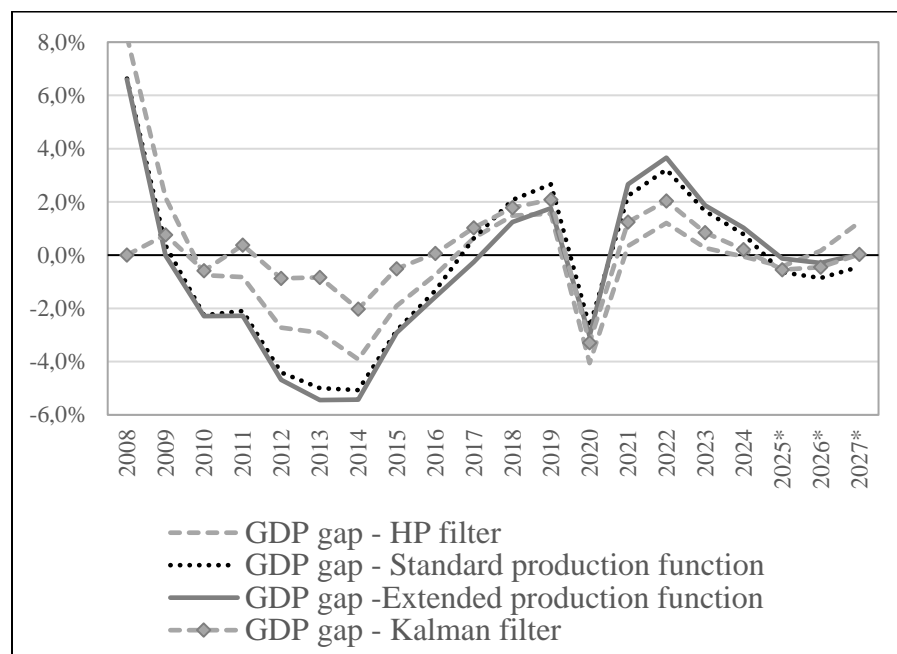
In addition, an initial estimate of potential GDP and GDP gap was made on the basis of a univariate statistical filter (HP filter) as benchmark. The HP filter is the least reliable method of estimating economic potential, and is rarely used as a basic model. The average estimated annual growth rate of potential GDP for all the used methodologies for 2025 is 3.6%, and 3.4% in the projection horizon (Graph 2). According to all the methods, the COVID shock was considered an unusual, cyclical, one-time shock.

Graph 2. Growth rates of real GDP and estimated potential GDP according to different methods



Source: CBBH (estimates of potential GDP and projections of real GDP), and BHAS (official statistics until 2024). * Projection horizon

Graph 3. GDP gap



Source: Calculations by the CBBH

According to data from the AMECO database, the average growth rate of potential GDP in the EU in 2024 was 1.4%. Our estimate for BH was 3.3%. The difference in the pace of potential GDP growth is intuitive, taking into account the level of development. However, the growth rates of the potential GDP of the newer EU members indicate the unused potentials in BH. For the latest member state to join the EU, Croatia, the potential GDP growth rate for 2024 was 4.3% and the GDP gap was 2.2%. Among the EU member states, Bulgaria recorded the lowest level of GDP per capita in 2024, expressed as a ratio to the EU average (66%). At the same time, the growth rate of potential GDP in Bulgaria is estimated at 3.3%. in 2024, and the GDP gap at 0.7%.

These data illustrate how low the estimated level of potential GDP growth in BH is, if faster convergence towards the EU average standard is to be achieved. The gap between BH and the reference countries is considerable, stressing the need to accelerate the implementation of structural reforms and strengthen development capacities. A key factor that can contribute to accelerating potential GDP growth, in long term, is the improvement of the overall factor productivity. A stable macroeconomic framework, together with institutional and structural reforms, will form the basis for effective and long-term sustainable convergence.

In order to ensure methodological consistency and international comparability, the CBBH plans to publish an estimate of potential GDP, and its gap, once a year, using the extended production function method. The estimates will be published with the spring round of medium-term macroeconomic projections.