

What does the "Public Debt Clock" show?

1. "Public Debt Clock" shows an estimated, current size of:
 - a. The total public debt, and
 - b. public debt per capita in Poland.
2. National public debt determines the size of the debt of the government sector, the sector of local government and social security sector, after excluding all mutual obligations between the entities of public finance sector (after so-called 'consolidation'). It includes the obligation of public finance sector due issued securities, amounting to cash receivables, loans and borrowings, taken deposits and other payable commitments. Public debt does not include contingent liabilities, for example, future pension liabilities of public finance sector (FUS).
3. Public debt, defined in the Public Finance Act, is not the same as the debt of public finance sector (general government) calculated according to the methodology used by the European Commission and Eurostat (ESA95). The main differences between the size of public debt and the debt of the general government and local government according to the ESA95 methodology are:
 - a. the public debt does not include the commitments of funds created within The State Development Bank of Poland (e.g. the National Road Fund)
 - b. the public debt includes liabilities from scientific institutes of the Polish Academy of Sciences.
4. The aim of "Public Debt Clock" is to show the current estimated amount of public debt, according to the official data concerning the size of the debt in the past, and official government projections regarding the size of the debt in the future.
5. To estimate the current size of the public debt in the "Public Debt Clock" following data will be used:
 - a. The debt of the public finance sector after consolidation (data published by The Ministry of Finance on a quarterly basis)
 - b. The projected size of the public debt at the end of each calendar year (data published by the Ministry of Finance in the strategy of debt management of public finance sector, data published by the government in long-term financial plans, and other official documents published by the government, which will contain updated forecasts of the size of the state public debt.
 - c. The structure of the State Treasury debt in foreign currencies at the end of each calendar year (data published by the Ministry of Finance in the annual Public Debt Reports)
 - d. The level of the average foreign exchange rates (data published by the National Bank of Poland),

e. The projected Polish population at the end of December of each calendar year (data published by the CSO in the "Forecast of the Polish population in the years 2008-2035")

6. The basis of the current size of the public debt estimate are the most current, historical data about the size of the public debt and the forecasts of the size of the public debt. For example, on the 28th of September 2010 the size of the public debt at the end of June 2010 is known (published on the 10th of September 2010) and the government forecast of that debt at the end of December 2010 (Published in August 2010 in the "Long-Term Plan of State Finance 2010-2013"). At the time of publication of quarterly data about the public debt size or a new forecast of the debt in the future, we make an update of the current estimated size of public debt as follows:

a. We calculate the current size of the public debt, denominated in foreign currencies at the end of the quarter to which the data correspond, taking into account the average exchange rate announced by the National Bank of Poland on the day of publishing the data. Because of the lack of current data about the currency structure of the public debt denominated in foreign currencies, we assume that the whole structure is the same as the currency structure of foreign debt by the State Treasury at the end of last year. That is because almost whole foreign public debt belongs to the State Treasury.

The estimate of the national public debt at the end of a calendar year is calculated according to a current exchange rate at the time of an update. For this purpose, we compare the current exchange rates (EUR and USD) with exchange rates of these currencies assumed at the end of the year in the debt management strategy. At the end of 2009, the debt in EUR accounted for 70.6%, in USD - 13.5%, in CHF - 7.6%, in yen - 7.2% (+ 1% in other currencies) of the total foreign debt of the State Treasury. Because of the absence of government forecasts for yen and Swiss franc at the end of the year, it was assumed that these courses will change proportionally to changes in the exchange rate of PLN / EUR until the end of the year.

b. The size of the public debt denominated in PLN is not considered in updates.

7. The current estimated value of the public debt is calculated assuming that the debt grows over time in a linear way. The debt increase in "Public Debt Clock" arises proportionally to the time between the last available data about the public debt size (after an earlier update concerning the exchange rate), and the end of the calendar year (also after an update concerning the exchange rate). After the publication of data about the public debt size at the end of September 2010 (on 10 December 2010), the last point of estimate will be the size of the public debt at the end of December 2011.

8. Example of an update of the public debt estimate from 11th of September 2010:

The size of the public debt denominated in foreign currencies at the end of June 2010 amounted to 201.2 billion PLN, at the end of December 2010 (from the "Management Strategy ...") to 178,4 billion PLN. The rate of the currency basket, in which the foreign debt

is denominated, at the end of June 2010 was 5.7% lower, and at the end of December 2010 – 0.05% lower than the rate from 10th of September 2010. Assuming the exchange rate from the 10th of September 2010, the amount of public debt denominated in foreign currencies at the end of June 2010 amounted to 190,3 billion PLN, and at the end of 2010 – 178,3 billion PLN.

	Public debt – end of June 2010	Public debt – end of December 2010
Foreign debt - exchange rate at the end of June 2010 and assumed by the government exchange rate at the end of December 2010	201.2 billion PLN	178.4 billion PLN
Foreign debt – upon the exchange rate from the 10 th of September 2010	190.3 billion PLN	178.3 billion PLN
Total debt - actual (June 2010) and projected (December 2010)	721.2 billion PLN	739.1 billion PLN
Total debt – upon the exchange rate from 10 September 2010	710.3 billion PLN	739.0 billion PLN

9. Example of the estimate of the public debt size:

At 13:00 on the 28th of September 2010 (89 days and 13 hours till the end of June 2010 and 184 days from the end of June to the end of December 2010) the estimate of total public debt amounts to:

$$SDP_{28.09.2010}^{13:00} = 710,3 + (739,0 - 710,3) \frac{(89 \cdot 24h + 13h) \cdot 3600s}{184 \text{ days} \cdot 24h \cdot 3600s} = 724.259.822.418,5 \text{ PLN}$$

$$SDP_{28.09.2010}^{13:00 \text{ per capita}} = \frac{724.259.822.418,5 \text{ zloty}}{38.091.951 \text{ men}} = 19.013 \text{ PLN}$$

According to this formula, in the next three months the public debt will grow daily by approximately 156 million PLN
