

Economics of central banking (Zentralbanktheorie und Zentralbankpolitik)

Supplementary slides

Nicolas A. Cuche-Curti, Swiss National Bank and University of St. Gallen

`nicolas.cuche-curti@snb.ch`

`http://cuche.net/classes.htm`

These slides present the main elements of the course 7,280; they are based on several papers and books (e.g. Walsh, 2003, Galí, 2008) whose references are given during the term; a separate reading list for the exam will be given after the term break.

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Growth rates

- Calculation of growth rate in percent between x_t and x_{t-1}

- Growth rate definition

$$GR = 100 \left(\frac{x_t - x_{t-1}}{x_{t-1}} \right)$$

- Approximation

$$GR = 100 \left(\frac{x_t - x_{t-1}}{x_{t-1}} \right)$$

$$\frac{GR}{100} = \frac{x_t}{x_{t-1}} - 1$$

$$1 + \frac{GR}{100} = \frac{x_t}{x_{t-1}}$$

$$\ln \left(1 + \frac{GR}{100} \right) = \ln \left(\frac{x_t}{x_{t-1}} \right)$$

$$\frac{GR}{100} = \ln(x_t) - \ln(x_{t-1})$$

$$GR = 100 (\ln(x_t) - \ln(x_{t-1}))$$