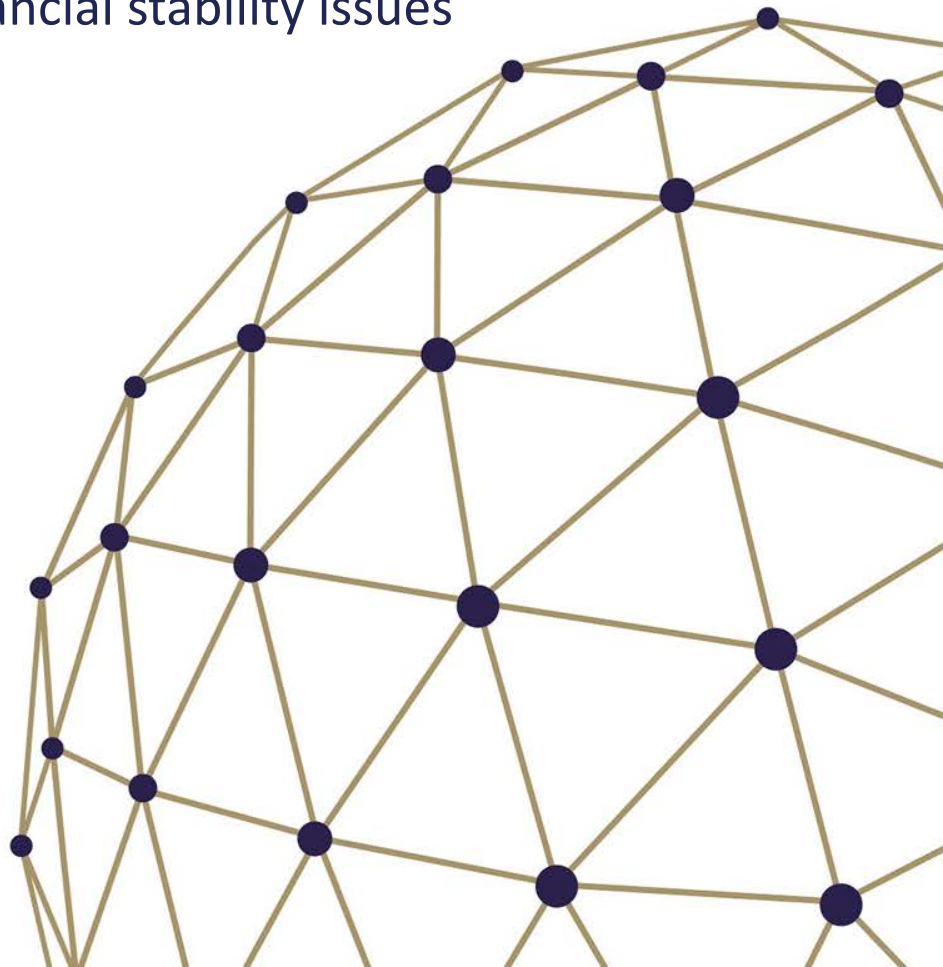
Financial deepening and “start point bias” Calculating credit gap in transition countries

Miklós Sallay

Consultant, Department of Macroprudential Methodology

Regional Seminar on financial stability issues

Sinaia, 23.10.2015.



Agenda

1	Preview
2	Methodological standards for calculating the credit gap
3	Weaknesses and restrictions of the methodology
4	What is the problem with financial deepening?
5	Start point differences on a Hungarian example

Preview

Credit gap should be the primary indicator, but this raises the task of calculating and calibrating this tool properly

- The Countercyclical Capital Buffer (CCB) has the primary role to provide soft landing in case of a credit crunch
- Therefore the build-up of CCB should rely on indicators of a possible credit crunch
- Studies, recommendations and regulatory practice shows that the Credit-to-GDP gap is the best sole indicator
- The credit gap is a statistical tool having its weaknesses and heavily depends on the data history
- This presentation gives an overview of those challenges and concentrates especially on the transition countries, where:
  - Pre-transition data is unusable, as the financial system was non-existent
  - Financial deepening gives a steep starting phase with possible structural breaks, raising the question of choosing the start point of data history properly

Methodological standards for calculating the credit gap

BCBS and ESRB provided guidance on the calculation methodology of a standard credit gap. According to this the gap should be:

- The difference between the ratio of credit to GDP and its longterm trend, resulting in a gap in percentage points
- Calculated on a quarterly base
- The credit / GDP rate is given by:
  - The broad credit (nominal credit aggregate, see BCBS(2010))
  - The nominal GDP calculated for each quarter, where GDP in each quarter is taken as the sum of the four most recent quarterly observations
- The long-term trend is calculated with a one-sided Hodrick-Prescott filter, where the smoothing parameter, lambda (λ) is set at 400,000

Weaknesses and restrictions of the methodology

Let's focus on the trend calculation:

- The long-term trend is calculated with a one-sided Hodrick-Prescott filter, where the smoothing parameter, lambda (λ) is set at 400,000

λ

λ represents an assumption on the relative length of the credit and the business cycle. The value 400,000 implies that the business cycle is four times longer than the credit cycle.

Problem 1: We should have a long enough data history to observe both the credit and the business cycle, or at least to be able to make a credible guess on the relative length of the cycles.

Structural breaks

Problem 2: The calculation is sensitive to structural breaks: like any crises period, but also changes in the data (i.e. German reunification).

Phase shifts

Problem 3: HP filter tends to show a phase shift: one more reason why not to use it for releasing the CCB.

Endpoint bias

Problem 4: One sided HP covers the problem of end point bias, but the starting point sensitivity remains.

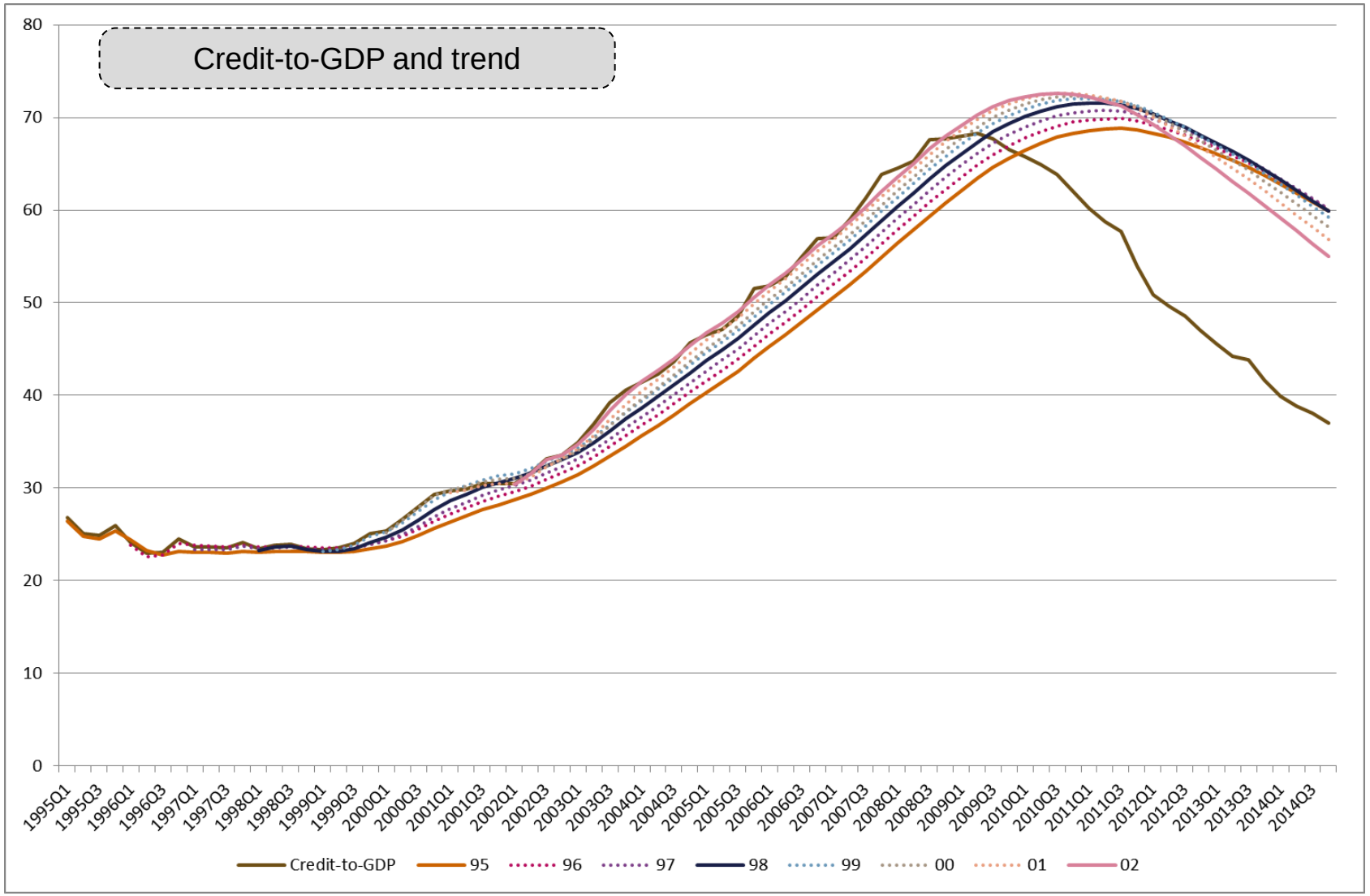
Starting period

Problem 5: The first five years of observation is considered as training period thus it is not usable for analysis.

What is the problem with financial deepening?

- Financially underdeveloped countries should have a healthy, equilibrium level of positive credit gap during the adaptation phase
- During the first decade of the post transition period the financial systems of the post socialist countries developed from level zero
- This adaptation period gives the trend a strong momentum what would bias the credit gap downwards
- The question when to start the observation period is not possible to determine by statistical methods
- We are having an already too short observation window
  - Observing the length of the credit and business cycle
  - First 5 years not usable

Start point differences for a possible Hungarian credit gap



Start point differences for a possible Hungarian credit gap