



Sovereign Risk and Financial Stability in the European Context

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Sovereign credit risk: a situation in which a sovereign sector (usually a national government) is unable to honour its pre-agreed financial obligations unaided and the country therefore defaults.

Financial Stability: a situation where the financial system operates with no serious failures or undesirable impacts on the present and future development of the economy as a whole, while showing a high degree of resilience to shocks coming from **various sectors of the economy**, the financial markets and macroeconomic developments.



The aim of the presentation is: simply to justify the designation of **sovereign credit risk as systemic risk**.



(I)
Sovereign Exposures and Systemic Risk



The two-way interaction between the banking sector and the sovereign sector:

- *sovereign sector*: the ultimate source of insurance, the supply of risk-free GB – a basis for the pricing of other assets,
- *banking sector*: the smooth flow of credit to the real economy, an important creditor for sovereign sector.

A **close** two-way link between banking and sovereign distress, with problems in the banking sector having **a negative effect** on the sovereign sector, and sovereign stress exacerbating the disruption in the banking system.



Three main transmission channels :

1. the provision of government support to banks, which *increase sovereign debt* => forms: liquidity measures, direct capital increase, troubled asset relief programs, government guarantees etc.
2. banking sector deleveraging, which, by amplifying the contraction in overall economic activity, leads to *falling budget revenues and rising budget expenditures*.
3. credit booms can give a one-off boost to government's fiscal balances: the government's fiscal position appears much stronger than it actually is, this may unjustifiably give governments the confidence to pursue policies that result *in increases in spending* that are unsustainable in the long run.



Four main transmission channels :

1. direct portfolio exposures: the higher bond yields (lower bond prices) associated with higher sovereign risk can hurt banks through their holdings of sovereign debt.
2. funding conditions (sovereign securities as collateral): increases in sovereign risk reduce the availability or eligibility of collateral, and hence banks' funding capacity.
3. the perceived ability of the sovereign to provide a backstop to banks under strain: being perceived in a weaker fiscal position (for example rating cuts) provides less credible and valuable guarantees or financial support => higher liquidity and credit risk (more expensive funding) for banks.
4. crowding out – the possibility of government debt crowding out private sector debt, sovereign distress increase the cost and/or reduces the availability of bank funding through debt.

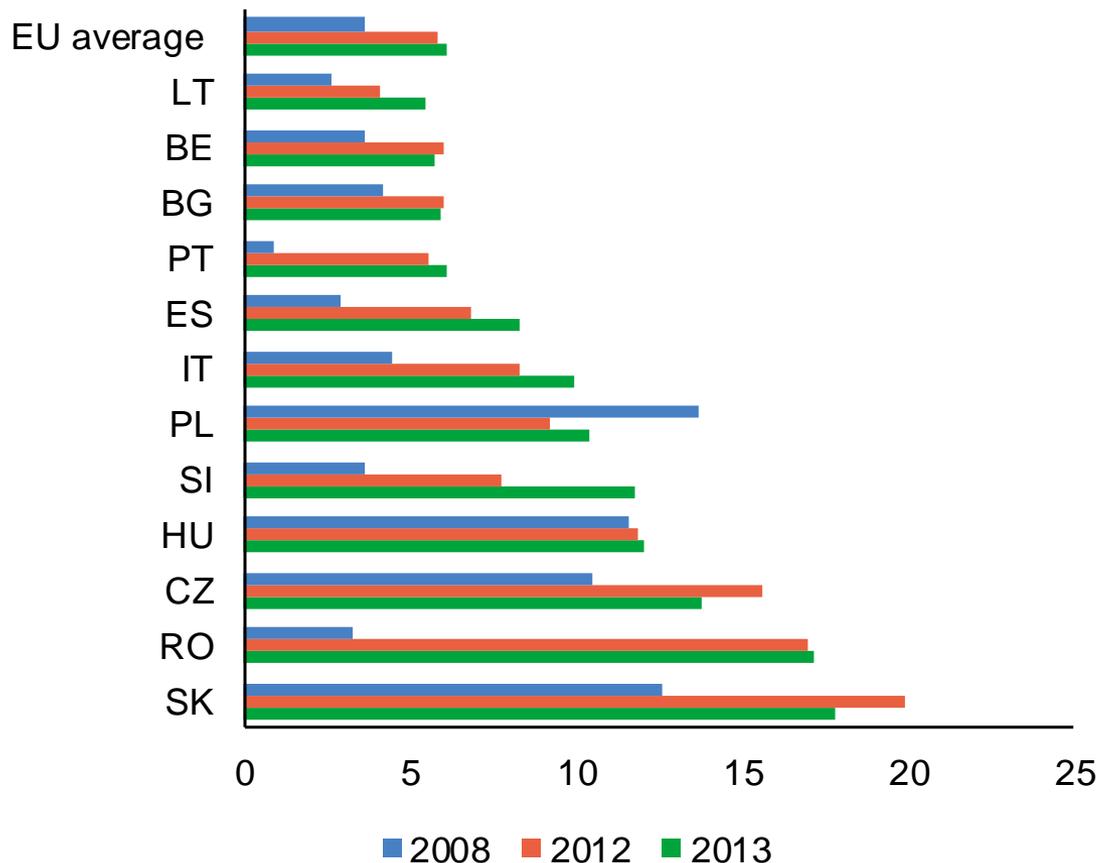


- The loss of availability of „the risk-free asset“ on whose existence most market risk management models are based. A loss of power of such models can in turn lead to a further increase in risk aversion and to knock-on effects on banks' portfolios.
- The channel of change in the attitude to risk: sovereign tensions may cause a rise in investors' risk aversion, which in turn may increase the risk premiums demanded on sovereign and bank securities and reduce banks' funding availability.



Domestic government bonds in MFI balance sheets

(%)



Source: ECB, CNB calculation

For other EU countries the share of government bonds in MFI balance sheets is below 5%. The EU average is computed as the arithmetic mean.



(II)

Motivation for Holding of Sovereign Debt



risk-free = zero default risk

Government bond markets are generally the most liquid, therefore government bonds are used as a store of value. There are two main reasons:

- 1. intertemporal debt servicing:** the sovereign sector as a debtor can carry its debt forward from one period to the next (from one generation to another).
- 2. government has power to change the degree of central bank independence:** government can „print money“ to pay off their debts. Their ability to do so depends mainly on the degree of central bank independence and on their ability to change it.



How will markets adjust to a loss of faith in the idea of risk-free sovereign? Do they need it?

1. sovereign securities serve as the *base asset* or *reserve asset* of the banking system: the low-volatility, low-credit-risk asset around which bankers and investors build their balance sheets and portfolios,
2. sovereign securities serve as a *benchmark* that is a reference for value,
3. sovereign securities serve as (high quality liquid) suitable *collateral*,
4. sovereign securities are used to *hedge* away certain risks,
5. sovereign securities as a proxy for *the risk-free rate* that helps to assess the riskiness of other assets.



The current and newly prepared European banking regulation treats sovereign risk by essentially not admitting the possibility of the domestic government defaulting on its debt, and the default risk associated with government bonds is considered to be zero up to a certain threshold:

1. a **low or zero** capital requirement for sovereign exposures denominated in the domestic currency,
2. a low capital requirement for exposures collateralized by government paper given the **very low haircuts** required for sovereigns with high ratings,
3. the **exclusion** of sovereign exposures from the existing limits on large exposures,
4. automatically to classify government bonds denominated in the domestic currency as **highly liquid, high-quality** assets, and
5. *moreover, the new Solvency II framework for the insurance sector envisages a zero risk factor for sovereign exposures.*



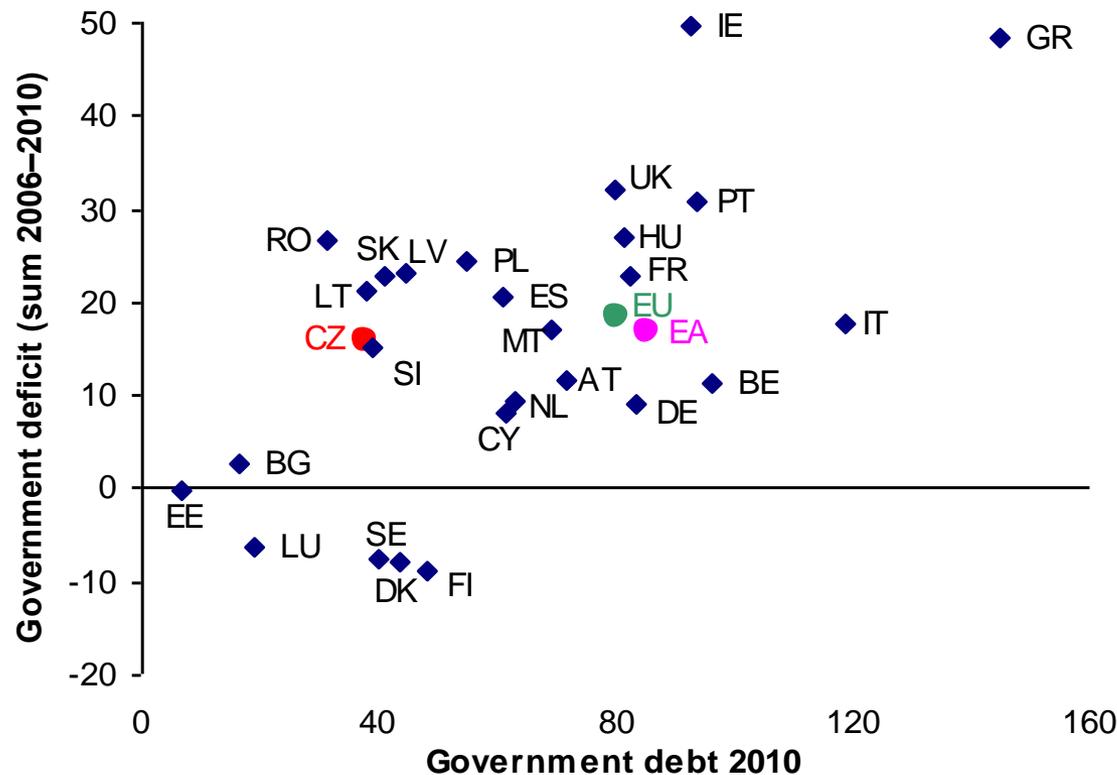
(III)

Can Risk-Free Sovereign Default on its Debt?

YES! 😞



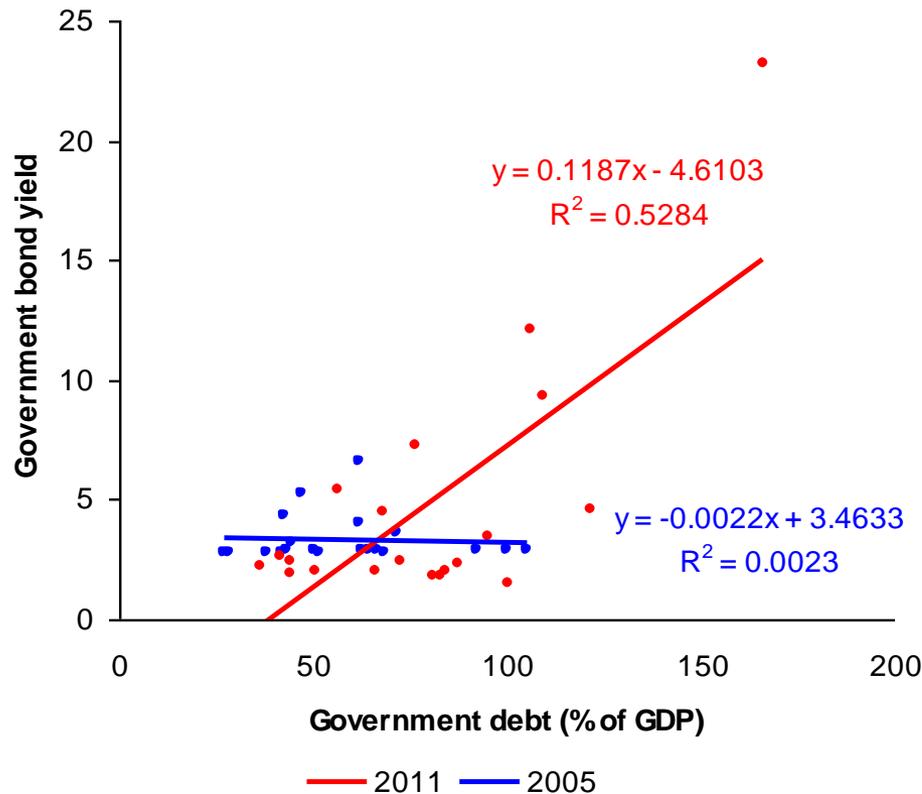
Public finance sustainability ratios in EU countries (in % of GDP)



- SDR is for the Czech Republic currently relatively low, thanks mainly to its relatively low level of debt (see chart)
- However, the transmission of a shock caused by a debt crisis in another country would certainly have a non-zero impact on the Czech economy



Relationship between the government bond yield and government debt in the EU countries



- The channel of change in the attitude to risk and the impact of heightened risk aversion are important for Czech financial sector (phenomenon of small, open and externally dependent economy).
- The link between government bond yields and government debt has increased significantly in the EU countries during the current financial crisis (red line).
- In 2005 this relationship was insignificant, whereas during the crisis financial markets started to put a higher price on sovereign default risk.
- Czech Republic: current level of public debt is relatively low, but the comparatively high rate of growth of debt + stronger perceptions of sovereign default risk \Rightarrow significantly increase the costs of poor budget discipline.



$$B_t = (1 + r)B_{t-1} + (E_t - T_t)$$

- Sovereign solvency is traditionally assessed by analysing public finance sustainability from a purely accounting perspective by comparing government revenues (T) and expenditures (E), while taking into account the absolute size of the debt (B) and the debt servicing costs, i.e. the effective interest rate (r):

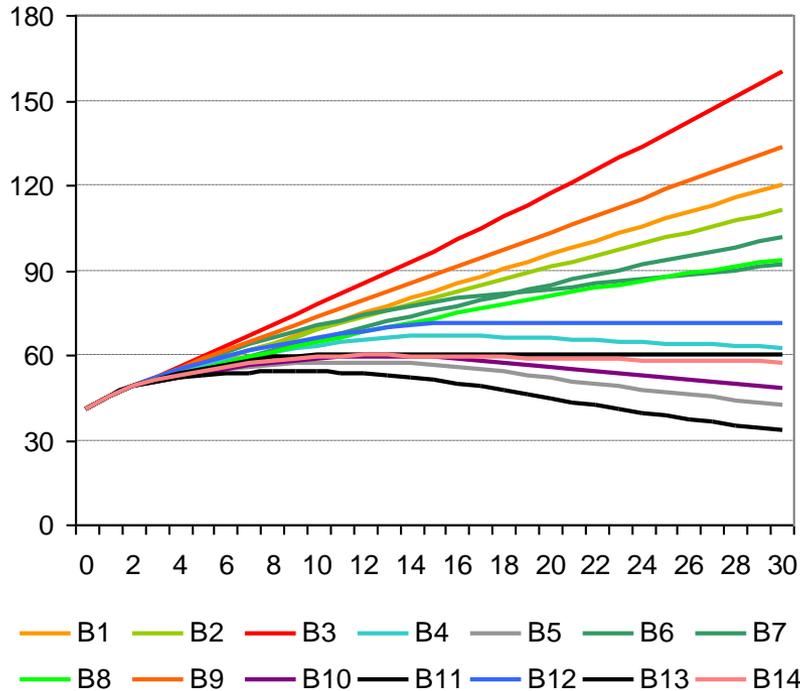
$$\underbrace{\frac{B_t}{Y_t} - \frac{B_{t-1}}{Y_{t-1}}}_{\text{Change in debt}} = \underbrace{\frac{(r_t - g_t)}{RG}}_{\text{Differential}} \underbrace{\left(\frac{B_{t-1}}{Y_{t-1}}\right)}_{\text{Debt servicing costs}} + \underbrace{\frac{(T_t - E_t)}{Y_t}}_{\text{Primary balance}}$$

- It is clear from equation (2) that the real debt level and the change therein (the “debt dynamics”) depend on the initial debt level, the real interest rate (r), real output growth (g) and fiscal policy as reflected in the resulting primary balance (PB=(Et-Tt)/Yt). The primary balance (net of debt servicing costs) expresses whether the government budget was prepared with a surplus (PB<0) or a deficit (PB>0). The key factor for the debt dynamics is the RG differential (RG=r-g). Assuming a balanced budget (PB=0), if (r) is lower than (g) in the long term the debt converges to a sustainable level. This situation is referred to as stable debt dynamics.



NOMINAL DEBT PATHS GIVEN DIFFERENT ASSUMPTIONS ABOUT ECONOMIC GROWTH, INTEREST RATES AND THE PRIMARY BALANCE

(Government debt as % of GDP)



Debt trajectory	GDP growth (g)	Real interest rate (r)	Primary balance (PB)
B1	2	1.5	deficit 3 % GDP
B2	2	1	deficit 3 % GDP
B3	2	3	deficit 3 % GDP
B4	2	1.5	consolidation (after 17 years PB = 0)
B5	2	1	consolidation (after 17 years PB = 0)
B6	2	3	consolidation (after 17 years PB = 0)
B7	3	1.5	deficit 3 % GDP
B8	3	1	deficit 3 % GDP
B9	3	3	deficit 3 % GDP
B10	3	1.5	consolidation (after 17 years PB = 0)
B11	3	1	consolidation (after 17 years PB = 0)
B12	3	3	consolidation (after 17 years PB = 0)
B13	2	2	consolidation (after 17 years PB = 0)
B14	2.5	0.5	consolidation (after 11 years PB = -1 %)

- To illustrate the potential long-term government debt trajectories, we prepared variant scenarios based on different assumptions about long-term economic growth (g), the effective real interest rate (r) and the government's consolidation efforts (PB). The initial state corresponds to the current debt level in the Czech Republic.



(IV) Forms of Sovereign Default Risk



An unsustainable fiscal stance does not mean that the government's debt is unsustainable. Fiscal unsustainability implies that current fiscal policies cannot last forever: sg needs to be adjusted otherwise the debt ratio would explode.

Two approaches:

1. An orthodox approach: **fiscal policy adjustment** – to raise the primary balance to a level that is sufficiently high to stabilise the debt ratio... creditors are confident in the sustainability of the debt.
2. An unorthodox approach: necessary to tax the holders of government paper; **the debt burden is transferred** from the debtor to the creditor in the form of *financial repression, debt restructuring, monetisation*.

The unorthodox approach usually implies very high costs: inflation, depreciation, loss of independence of authorities, recession, the sacrificing of other policy targets etc.



(V)
General Policy Recommendation



„The policy recommendation is simple: appropriate buffers should be built in good times to cushion the impact of bad times.“ (Caruna J. & Avdjiev S.)

Fiscal policy: fiscal adjustment in a timely manner (to combine flexibility in the short run with credible consolidation in the long run) and building up fiscal buffers to restore the risk-free status of sovereigns.

Macroprudential policy: to achieve the goal = to safeguard the soundness and stability of financial institutions; the prudential policy should be directed at motivating financial institution not to underestimate sovereign risk and to hold an optimum level of sovereign exposures. .

Monetary policy: setting rules of central bank collateral policy should not be too benevolent towards domestic government sector; setting of parameters (penalty rates or haircuts) should correspond to implemented policy (MP vs. LOLR policy).



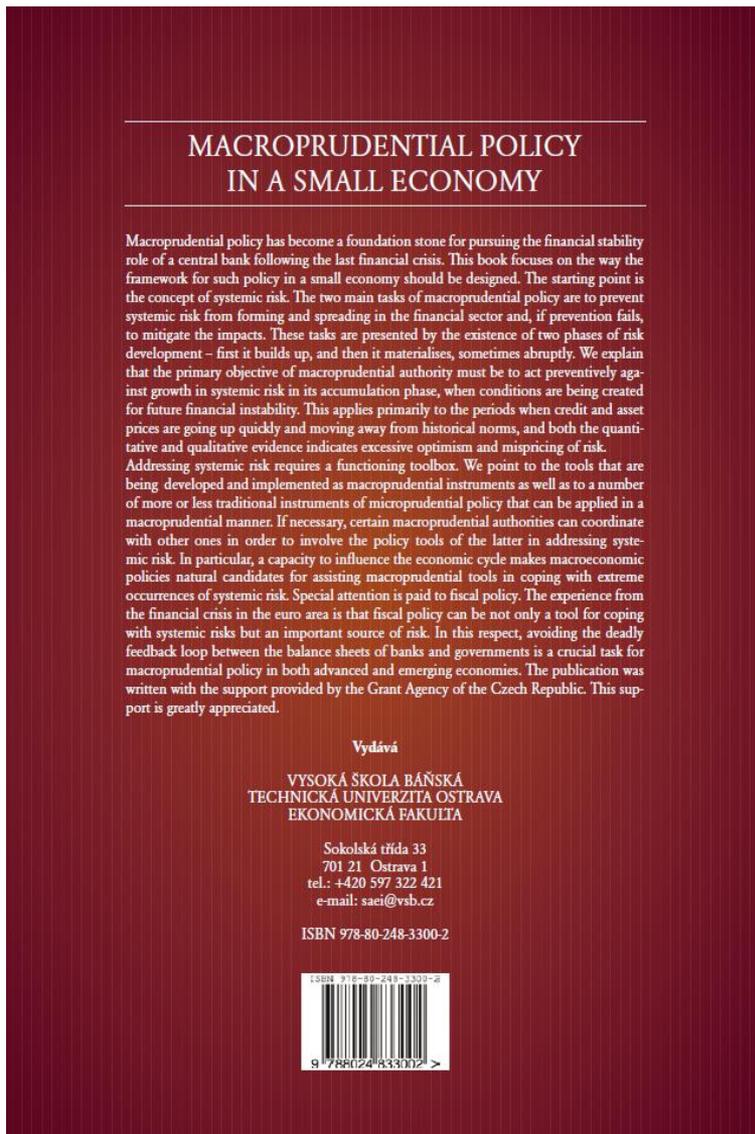
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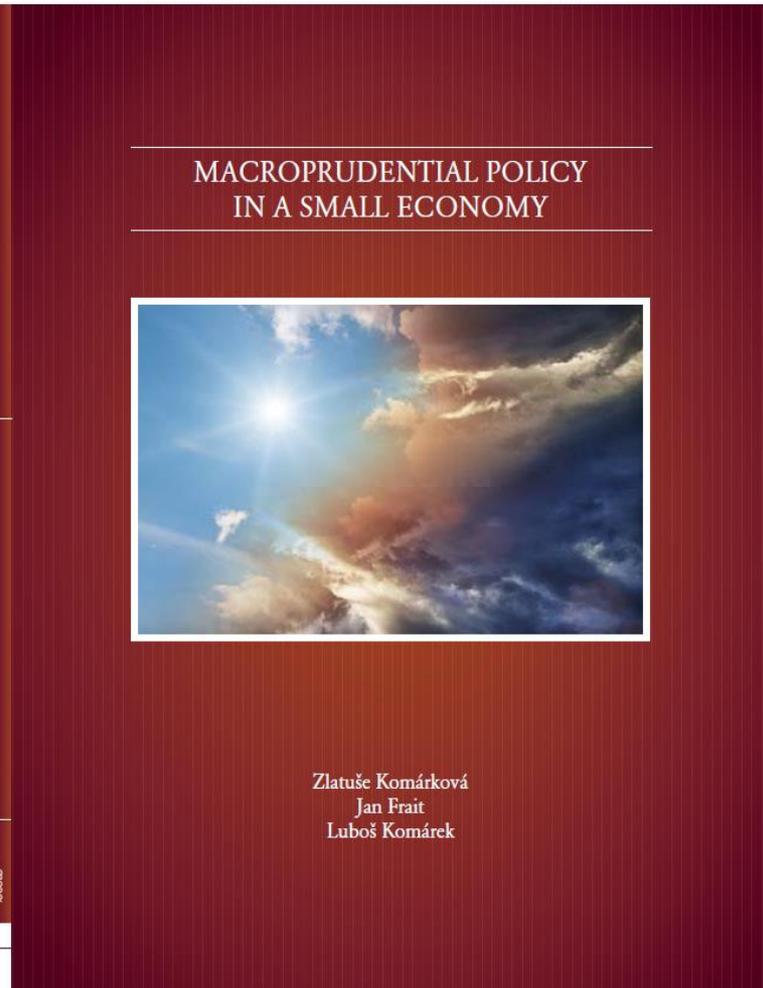
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The sovereign sector is regarded as solvent: the discounted present value of future public budget revenues and expenditures is equal to or lower than the discounted value of its present debt. Surpluses to repay debt.

History shows that:

- the question regarding the level of sovereign risk is not so much linked to the **fundamentals**.
- the question regarding the level of sovereign risk is linked to „**who said that the sovereign is credible**“.

Sovereign risk premium appears suddenly: the PD is close to zero in the long term. Why?

- „markets operate **on trust**“ – only if creditors are convinced that the debt will be repaid, then government bonds has risk-free status. In the center is **credibility**.

Doubts about debt sustainability can be self-fulfilling, as they bring higher risk premia which, in turn, require larger primary surpluses and greatly complicate the government's task of achieving fiscal equilibrium.



There may be a change in expectations in the center as investor fears reinforce negative interactions between shortened fiscal spending, bank losses and economic recession.

Investors suddenly find it rational to reduce sovereign exposure, some completely leave the government bond market due to concerns about the increasing volatility of prices in this market. What will happen?

Banking sector: reduction of demand for government bonds (GB) => GB price decrease => impact on lenders' balance sheets (losses from revaluation) => increase in cost of financing => further sales of GB => further decline in GB price => further impact on lenders' balance sheets => market becomes illiquid (supply vs. demand) => concern about solvency of banks => **to request government assistance**

Sovereign sector: GB price decrease = GB yield increase => higher surplus requirement => complications to achieve fiscal equilibrium => liquidity and solvency difficulties => **request banks for assistance** („home bias effect“)



someone has to absorb losses, to take over the credit / liquidity risk, to help increase market confidence or prevent a financial system collapse=> Who?



CEB accepts fiscal dominance, sacrifices targets and provides active accommodation of fiscal consolidations by monetary policy:

- holds low-cost government financing (manipulation with yield curve),
- provides liquidity in government bond and/or money market.

Can CEB as an independent institution refuse and maintain its dominance => the government default? Yes, it can. However, as fiscal policies become unsustainable, monetary policy becomes irrelevant at best. Market would decline to buy the debt, raising long-term interest rates, and the currency would appreciate, importing inflation, irrespective of the monetary stance.

There is no question that price and financial stability depend upon the maintenance of fiscal stability.