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Fiscal Risk Assessment at the CBR

Ľudovít Ódor

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Main messages

- Challenging and multi-dimensional task (accounting, macro, demography, sectoral analysis, qualitative assessment etc.); impossible to compress all risks into one fan chart
- Intertemporal net worth as an organising principle and benchmark for transparency
- Three communication devices

What is Fiscal Risk?

„a source of fiscal stress that could face the government in the future“

(Polackova Brixi and Schick eds., 2002)

„the possibility of deviations of fiscal outcomes from what was expected at the time of the budget or other forecasts“

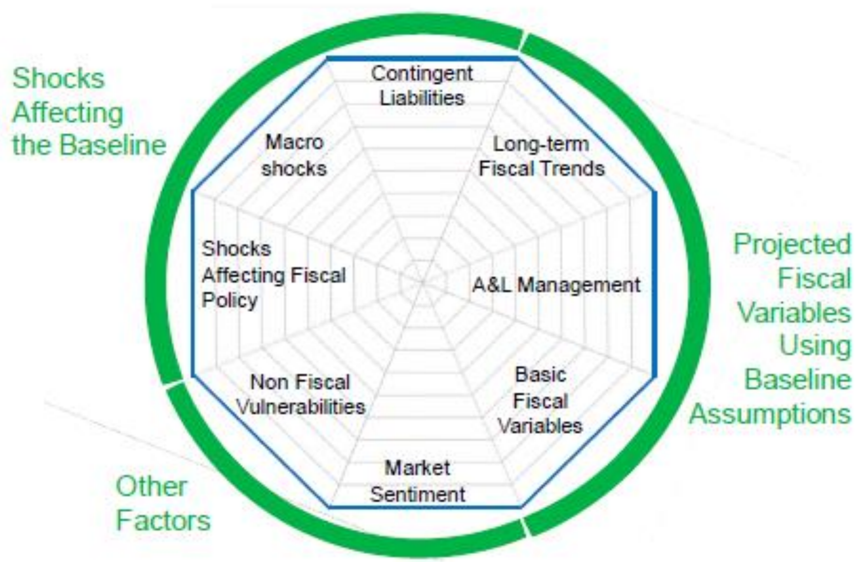
(Cebotari et al., 2009)

Fiscal Risk Matrix

	Direct liabilities	Contingent liabilities
Explicit liabilities	Sovereign debt Expenditure composition Expenditures legally binding in the long term	State guarantees for non-sovereign borrowing Umbrella state guarantees Trade and exchange rate guarantees State guarantees on private investments State insurance schemes
Implicit liabilities	Future public pensions Social security Future health care financing Future recurrent costs of public investment projects	Default of subnational entity Banking failure Cleanup of liabilities of entities being privatized Failure of pension funds Possible negative net worth and/or default of central bank Other calls for bailouts Environmental recovery, disaster relief, military financing

Source: Polackova Brixi and Mody (2002)

The Risk Octagon



Source: Cottarelli (2011)

Fiscal Framework in SK

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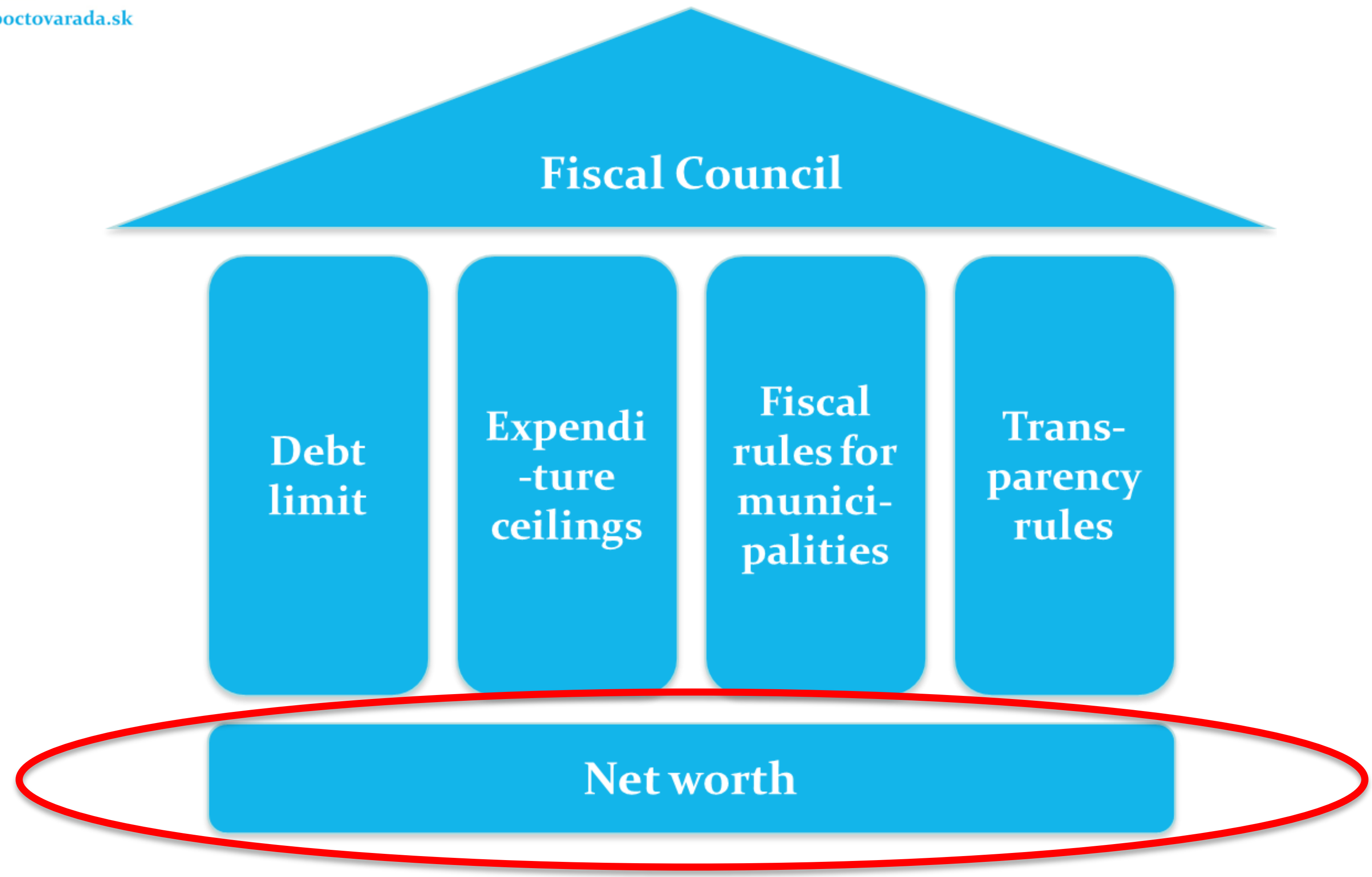

Risk Assessment

Company		Public Sector
Profit/Loss Statement	⟷	Budget
Balance sheet	⟷	Net worth
Cash-flow	⟷	Debt and liquidity management

Intertemporal Net Worth

ASSETS	LIABILITIES
A1 Buildings	L1 Explicit debt
A2 Infrastructure	L2 Implicit liabilities
A3 Public sector capital stock	L3 Contingent liabilities
A4 Liquid financial assets	L4 Other Liabilities
A5 Net worth of the central bank	
A6 net worth of state enterprises	
A7 Natural resources	**NET WORTH**
A8 Ecological wealth	
A9 Other assets	

Organizing principle and benchmark for transparency

Inter-temporal Net Worth

$$\Delta INW = PV(Flows) + Revaluations$$

$$Flows = General\ government + Other\ impacts$$

$$General\ gov. = central\ gov. + municip + EU\ funds + interest$$

$$Central\ gov. = NPC + Policies$$

CBR assesses risk in reverse order

CBR´s seven step approach

1. NPC scenario
2. Policy impact assessment
3. Other parts of general government
4. Interest expenditures/debt management
5. Changes in other assets (from A5 to A9)
6. Changes in other liabilities (from L2 to L4)
7. Revaluations and asset price movements

Budget balance (primary)

Cash flow

Change in the net worth

CBR´s Approach

1. NPC – no-policy-change scenario
2. Policy impact assessment
3. Municipalities + EU funds + extra-budgetary funds and other entities
4. Interest expenditures/debt management
5. Other assets – central bank, public companies, healthcare, PPPs, etc., fixed assets (hidden debt)
6. Other liabilities – implicit and contingent liabilities
7. Revaluations, asset price movements

NPC Scenario

<u>Risks to measure:</u>
macroeconomic risks, challenges from population ageing, risks related to the tax-benefit system

<u>CBR´s toolkit:</u>
ECM forecasting model, DSGE model, principles for one-off and temporary measures, cyclical adjustment methodology, basic tax models, simple models of demographic and labor market trends, Slovak Pension Model (SLOPEM), pension model of armed forces (PESO), Long-Term Healthcare Model (LHTM), EUROMOD and other microsimulation models

Policy Impact Assessment

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<u>Risks to measure:</u>
risks in cost-benefit analysis, political risk, risk of policy reversals

<u>CBR´s toolkit:</u>
Small-scale multiplier models, behavioral microsimulation model linked to a simple macro model, cohort level-simulations, generational accounting, distributional impacts

Other Parts of General Government

<u>Risks to measure:</u>
sectoral risks, administrative capacities

<u>CBR´s toolkit:</u>
simple sectoral models, detailed database for every municipality, analysis of EU funds, budget traffic lights

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Interest expenditures

Risks to measure:
liquidity risk, credit risk, refinancing risk

CBR´s toolkit:
three factor yield curve model linked to macroeconomic variables (URSIM), detailed portfolio of debt and liquidity management (UMOD), stock-flow adjustments, fiscal limit

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Other Assets

<u>Risks to measure:</u>
monetary system, public companies, ecological risks, depletion of natural resources, capital stock (fixed and human)

<u>CBR´s toolkit:</u>
analyses of large public companies and the central bank

Other Liabilities

Risks to measure:
Implicit and contingent liabilities

CBR´s toolkit:
SLOPEM, PESO, LHTM, database of legal claims and guarantees

Revaluations

Risks to measure:
exchange rate risk, commodity price risk, other asset price risk, data revision risk

CBR´s toolkit:
URSIM, stochastic simulations

Outcomes from Risk Assessments

- Quantitative:

  fiscal gaps, cost-of delay, budgetary traffic lights, yearly ex-ante risk table, intertemporal net worth

- Qualitative:

  contingent liabilities (some), market sentiment

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Budgetary Traffic Lights

Monthly evolution of regular budget items

Expected deviation at the end-of the year

Expert assessment of irregular items and one-offs

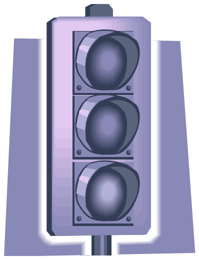
Expected deviation at the end-of the year

Medium-term fiscal risks

Fiscal stress index (So)
No-policy deviations from targets for t+1

Stress in year t

Stress in year t+1



Candidate for a Summary Indicator

- „Safe“ or „sound“ value of debt = fiscal limit – „reserves“
- Theory inconclusive, but some practical guidance is possible
- Empirical aspects – „reserves“ are needed for:

- long-term sustainability
- for counter-cyclical fiscal policy (optimistic potential growth estimates)
- contingent liabilities including potential bail-outs and central bank losses
- vulnerability to external shocks
- international risk-sharing

Fiscal Space Review?

- Comprehensive quantitative and qualitative fiscal risk assessment
- Stocks, flows and cash-flow
- Every 3 or 4 years

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Thank you for Your attention!