

Meeting of the Network of EU IFIs
November 23th, 2018, Bratislava



Budgetary Traffic Lights

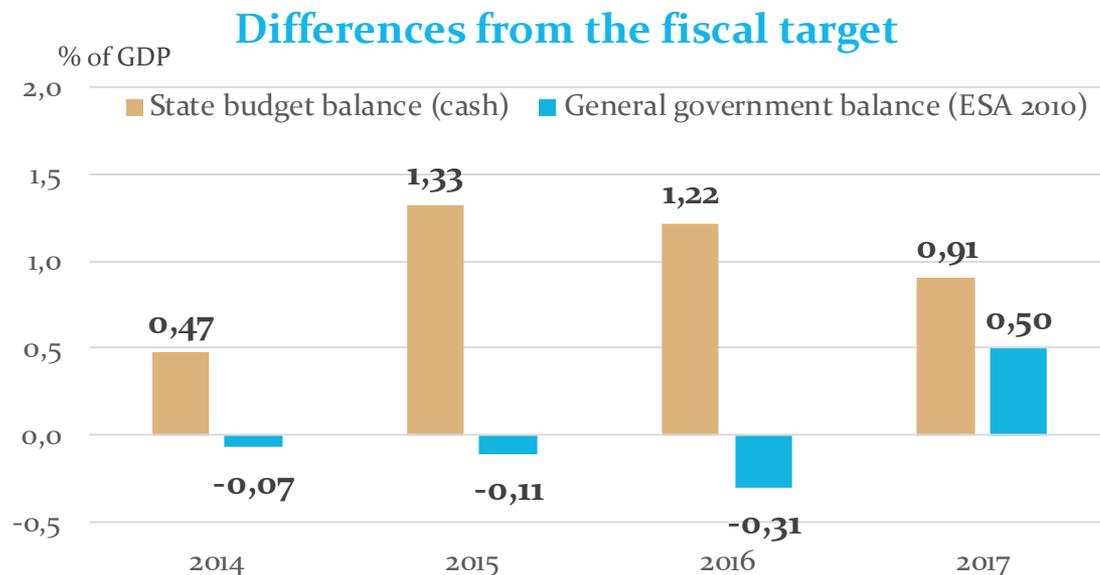
Budget nowcasting at the CBR

Matúš Kubík, Pavol Majher

www.rozpoctovarada.sk

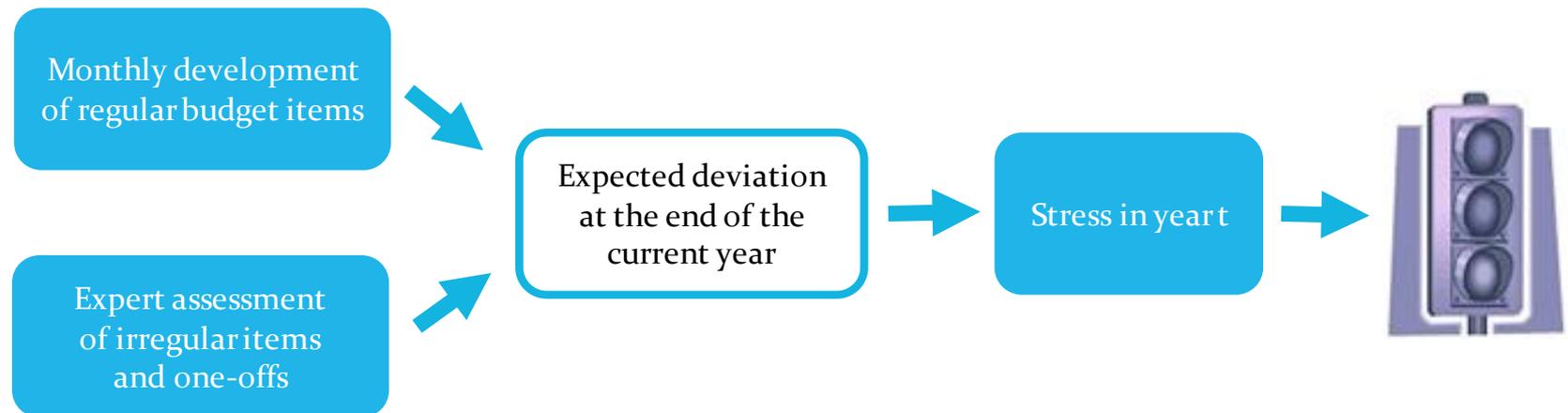
- One of the key elements of CBR mandate: Monitoring and assessment of the public finance development
- Currently: Limited information for in-year developments
 - Ministry of Finance (MoF) estimates twice a year (SP, DBP)

- MoF reports monthly cash balances of the state budget
- Can be misleading, as link with the general government balance is weak



Budgetary Traffic Lights

- The framework developed and used by the CBR to evaluate fiscal stress in the short-term
- Define fiscal risk in terms of an expected deviation of the budget balance from its fiscal target
- Use colors of the traffic light to communicate a magnitude of this fiscal risk



Objectives / Motivation

Surveillance of budgetary risks in “real” time

- Short-term horizon
- Medium-term horizon

Identification of government measures

- Necessary to meet the objectives
- Ex-post evaluation of realization

Input into CBR documents

- Evaluation of fiscal outcomes
- Assessment of Stability Programme and Draft Budgetary Plan

Communication to the general public

- Increasing transparency
- Building brand awareness of the CBR

Cash / ESA 2010

Sources of financing (national resources / EU / co-financing of the EU funds)

Economic classification / Entities of the public sector

State Treasury accounts

- Quarterly since 2008
- Monthly since 2013

Ministry of Finance estimates

- Included in official documents

Budgetary Information System (budgeted values)

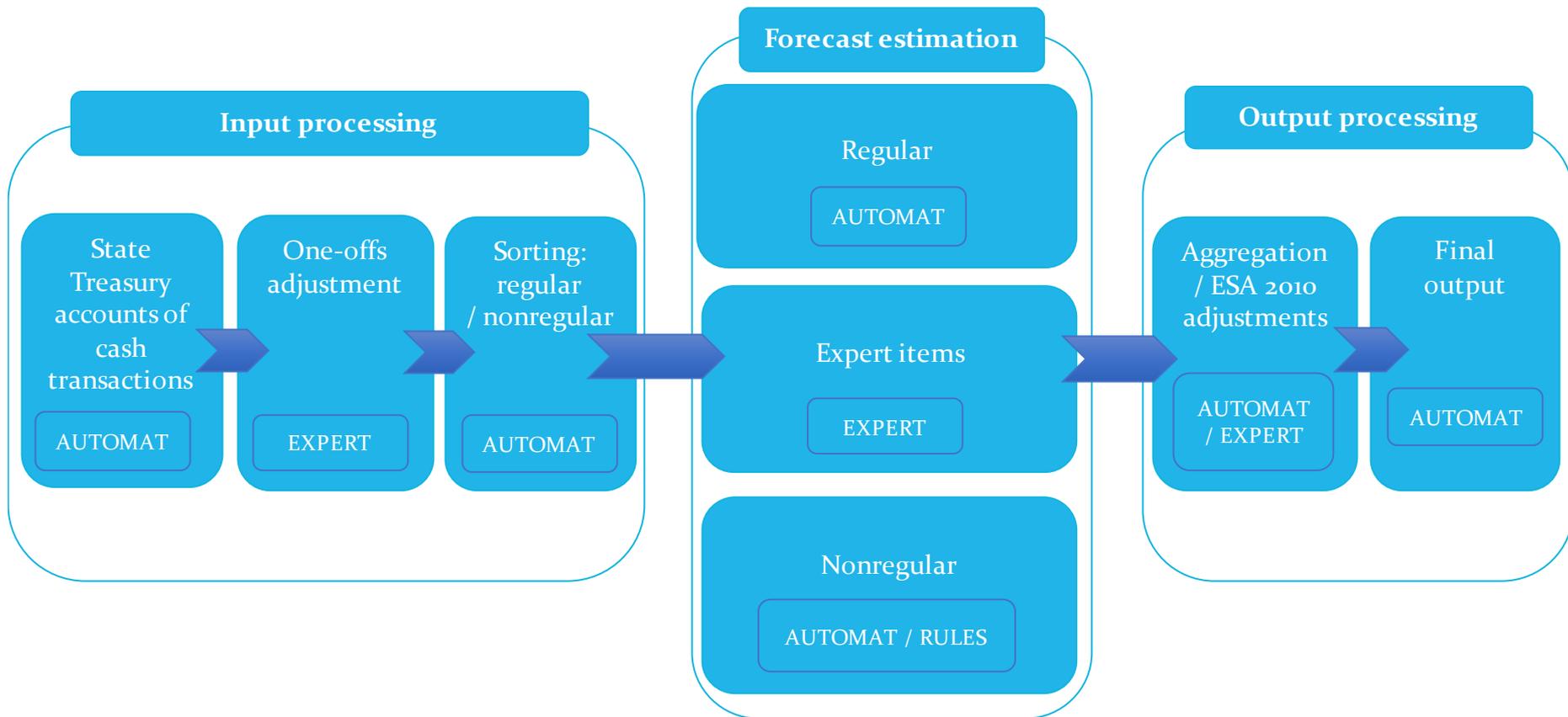
- Approved / Adjusted

Other sources

- Ministry of Health, Social Security Agency, media, ...

- Key input for the forecasting algorithm: State Treasury accounts
 - report monthly cash transactions for all government entities

Forecasting framework



Baseline method

- Sorts budgetary items based on cross-year similarity (or lack thereof) of their in-year developments
- Obtains forecasts for “regular” series by extrapolation using weighted historical averages

Expert assessments

- Provide forecasts for selected areas of the public sector
 - E.g. tax revenues, healthcare sector expenditures, local governments, interest payments on public debt
- Employ complementary sources of information and are often related to other CBR activities

Projections and fiscal risk

- Important: determine the level of fiscal risk based on differences between the forecasted balance and the target.
- Our approach: simple numerical thresholds in % of GDP.

Difference x between the forecasted budget balance and the target	Level of fiscal risk
$x \geq -0.1\%$ of GDP	low
-0.1% of GDP $> x \geq -0.5\%$ of GDP	medium
$x < -0.5\%$ of GDP	high

- Pros : - simple and easy to communicate, transparent
- Cons: - tight link to projected balance without any other factors
- may lead to frequent changes in risk levels

Colors of traffic lights

- Traffic light colors provide a straightforward and transparent way to communicate short-term fiscal risk.
- Green light “GO” – the budget is on track to meet the objective
- Red light “STOP” – unless the government makes adjustments, the balance will most likely fall short of the target

Difference x between the forecasted budget balance and the target	Level of fiscal risk	Color of the budgetary traffic lights
$x \geq -0.1\%$ of GDP	low	GREEN
-0.1% of GDP $> x \geq -0.5\%$ of GDP	medium	YELLOW
$x < -0.5\%$ of GDP	high	RED

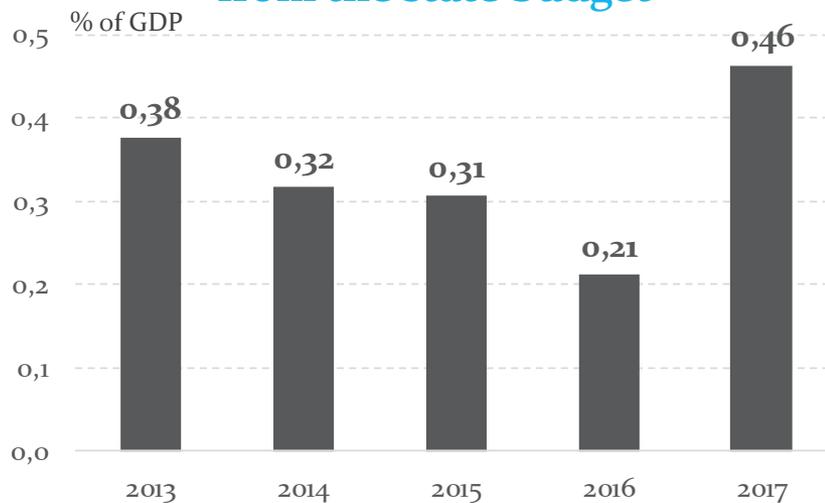
Discussing the setup

- Low risk threshold at $-0,1$ % of GDP (as opposed to 0 %) accounts for small imprecisions
- The government possess a large space for the end-of-year changes => important to communicate the outcome:
“expected amount of risks to the budget balance, unless the government makes adjustments”
- Key: Transparency of evaluation
 - EX-ANTE: detailed characterization of the forecast
 - EX-POST: identification and explanation of differences between CBR forecasts and the final outturn

End-of-year fiscal adjustments

- Gov't possesses “tools” to induce large changes to the balance, often in reaction to in-year developments
 - Postponement of investment, keeping expenditure reserves unused, etc.
 - Tax collection repeatedly overperformed budget projections in recent years.

**Postponed investment
from the state budget**



**Budgetary reserves
(excl. wages)**



Current status of the project

- October 2018 – first publication as a technical forecast of the Secretariat of the CBR
- November 2018 – included in the CBR document “Evaluation of the Draft Budgetary Plan 2019”
- Objective:
 - monthly reporting
 - forecasts for a current year t starting in March (data limitations) and running until March $t+1$
 - Regular input into official CBR documents

The screenshot shows the RRZ website interface. At the top, there is a navigation bar with links for 'ÚVOD', 'O RADE', 'PUBLIKÁCIE', 'UDALOSTI', 'DÁTA', 'KALKULAČKY', 'ROZPOČET PRE ĽUDÍ', 'BLOG', and 'LINKY'. A search bar is also present. The main content area features several articles and widgets. A red dashed circle highlights the 'ROZPOČTOVÝ SEMAFOR' widget, which displays budgetary indicators. Below it, a video player shows a presentation titled 'Hodnotenie Návrhu rozpočtu verejnej správy na roky 2019 až 2021'. Other widgets include 'Aktuálna hodnota hrubého dlhu' (50.9% HDP), 'SIM TASK' (NASIMULUJTE SI SVOJU REFORMU), and 'DÔCHODKOVÝ VEK' (VÝPOČÍTAJTE SI SVOJ).

Hodnotenie Návrhu rozpočtu verejnej správy na roky 2019 až 2021

- On the main CBR webpage:
 - Graphic with basic info and a link to the BTL website

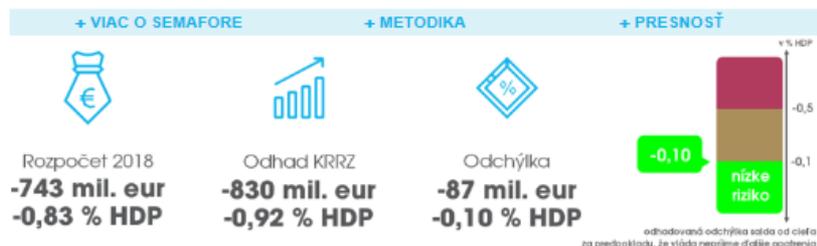
BUDGETARY TRAFFIC LIGHT
Forecast of the balance - November 2018

The graphic features a traffic light with a green light and a sign that says 'Nízke riziko'. It displays the following data:

- Budget 2018: -0,83 % HDP
- Forecast SCBR: -0,92 % HDP
- Difference: -0,10 % HDP

Rozpočtový semafor

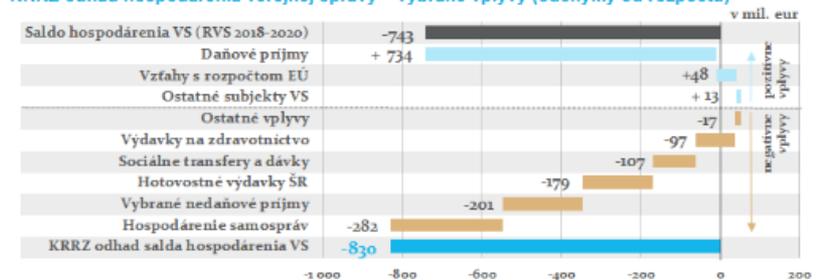
Rozpočtový semafor je model, ktorý na základe najnovších údajov automaticky prognózuje koncoročné plnenia jednotlivých príjmových a výdavkových položiek subjektov verejnej správy (VS). Nad rámec automaticky prognózovaných premenných model preberá expertné odhady KRRZ. Údaje sú aktualizované mesačne, pre obce a VÚC sú k dispozícii na kvartálnej báze. Cieľom modelu je priebežná identifikácia odchýlok a rizík voči schválenému rozpočtu VS.



Vývoj KRRZ odhadu koncoročného hospodárenia verejnej správy (bez EÚ zdrojov)



KRRZ odhad hospodárenia verejnej správy – vybrané vplyvy (odchýľky od rozpočtu)



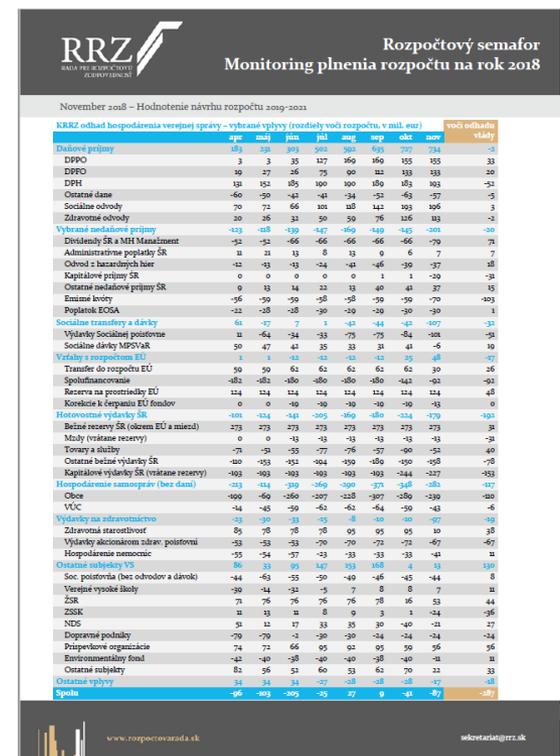
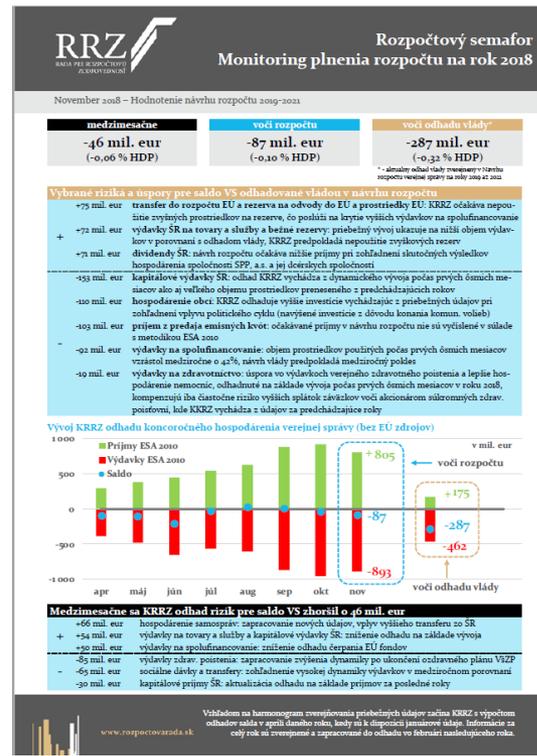
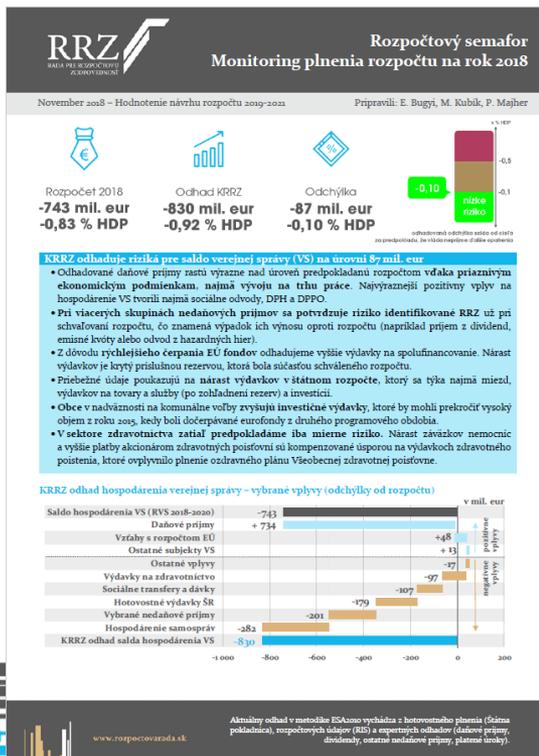
- Budgetary Traffic Light webpage:

- Summary info and the traffic light color scale

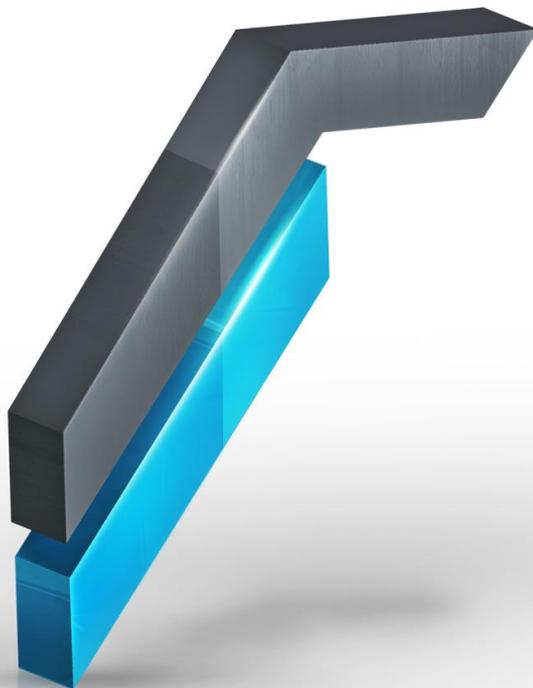
- Overview of forecast development in previous months (+ revenues and expenditures)

- Factors contributing to forecasted differences vs. the fiscal target

- A report (3 page pdf) accompanies each published forecast.
 - Characterization of the most important risk factors (+ and -)
 - Description of m-o-m changes
 - Differences vs. the budget for detailed structure of items



1. Using advanced forecasting methods
 - Complement to the current setup
 - Designing an appropriate method selection mechanism
2. Formalization of expert assessment methods
 - Written reports or working papers to increase transparency
3. Medium-term time horizon
 - Expand framework to provide projections for three subsequent years consistently with the MTBF



Council for Budget
Responsibility

Imricha Karvaša 1
Bratislava 1
813 25
Slovakia

www.rozpoctovarada.sk