OGResearch in Brief

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March 21, 2013

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Who are we?

Outline

Who are we?

What do we do?

Who are we looking for?

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Not a common consultancy

- Macroeconomic consultancy . . .
- ... Exploiting model-based tools, originally developed for (monetary) policy analysis, for profit-motivated activities
- ... Orienting on emerging economies
- ▶With an outreach to applied economic research
- Some facts:
 - Operating since 2009
 - About 25 employees currently (former CB or IMF employees, CERGE-El alumni)
 - Based in Prague

Who are we?

Partners well recognized by international community

- David Vávra implemented a model-based forecasting in the CNB
 - advised the Governor
 - as IMF consultant, he advised on fixed to float exchange rate regime transitions and implementation of inflation targeting regimes in a number of other central banks
 - After leaving CNB, Ondra helped develop and launch the IMF's GPM, GAPM and GIMF modeling frameworks
 - developed Dynare++ and Sirius computational software for macro-modeling
 - was a monetary policy advisor to Bank board of the CNB
 - coordinator of the monetary policy research in the CNB

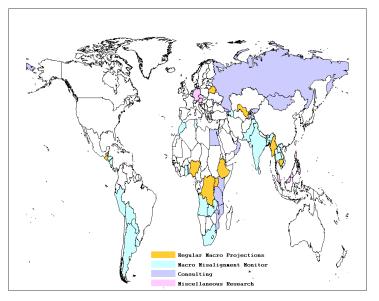
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Ondra Kameník

Martin Cincibuch

Global Outreach



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Main Activities

- Macroeconomic projections of emerging market economies (17 countries)
- Macroeconomic misalignment monitor (31 countries)
- Consulting for central banks on monetary policy issues and model-based forecasting
- Ad hoc research projects

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Macroeconomic projections - Client

Main client The Currency Exchange Fund (TCX)

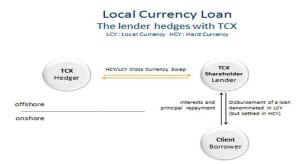
- Amsterdam based fund
- Founded by development finance institutions to diversify foreign exchange exposure



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Macroeconomic projections – Where do we fit into the TCX's business

TCX offers cross-currency swaps



- Price of the swap depends on expected future exchange rate and interest rates, and their volatility/uncertainty
- Based on the macroeconomic projection we compute implied swap rates (prices) at non-existent, illiquid or severely distorted markets

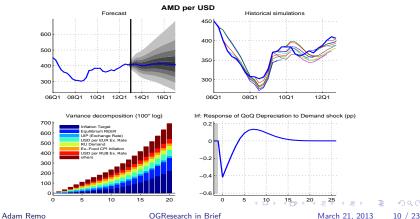
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Macroeconomic projections - OGR's framework

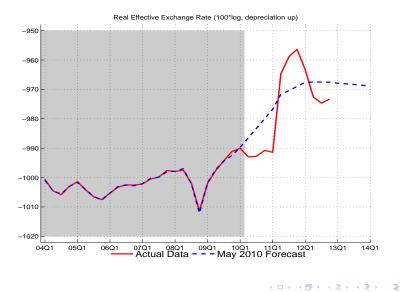
- The whole concept is called *Forecasting and Policy Analysis System* (FPAS)
- New Keynesian models of small open economy you might have heard about this models in advance macro classes
- Models are tailored and calibrated to countries' characteristics



Macroeconomic projections – Belarus example

- ▶ State controlled economy heavily dependent on an oil-transit windfall (share of mineral exports \approx 40%, energy subsidy worth of 13% of GDP in 2008).
- OGR expected terms of trade shock in 2011 due to new agreement with Russia on oil tariffs . . .
- ... and substantial weakening of the BYR.
- OGR's forecast outperformed other "competitors" and saved an investor from losses.

Macroeconomic projections – Belarus example



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Macroeconomic projections - Belarus example

Table : Nominal BYR per USD Exchange Rate Forecasts

Source	Date of forecast	2010	2011	2012
BMI (eop)	Jan 2010	2900.0(f)	2800.0(f)	-
GET (eop)	Jul 2010	3150.0(e)	3300.0(f)	-
WB (avg)	Jan 2011	2979.3	3046.2(f)	3096.1(f)
GET (eop)	Apr 2011	3000.0	3300.0(f)	3630.0(f)
OGResearch (avg)	May 2010	3052.1(f)	3583.0(f)	3904.5(f)
OGResearch (eop)	May 2010	3222.1(f)	3745.6(f)	3971.1(f)
		2070.2	4104.0	
Actual Data (avg)	as of Sep 30, 2011	2979.3	4104.2	-
Actual Data (eop)	as of Sep 30, 2011	3013.7	7750.0	-

BMI: Business Monitor International; GET: German Economic Team; WB: World Bank

Table : Yields on Eurobonds (monthly average, percent p.a.)

Maturity	Date of issuance	Initial	as of Sep 30, 2011
5-Year Government Bond	Jul 2010	8.233	16.830
7-Year Government Bond	Jan 2011	9.612	14.524

OGR 4Y swap rate as of May 2010: 21.3% p.	a.
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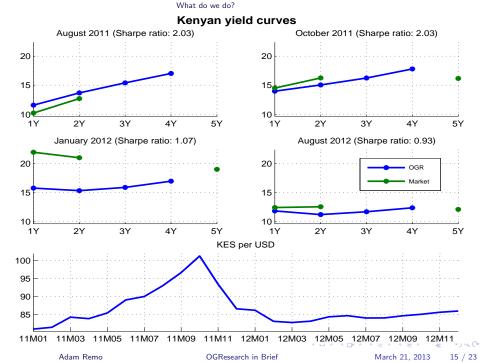
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Macroeconomic projections – Kenya example

- Excessively loose monetary policy
 - ▶ Interest rates were steadily declining down to 1.3% until March 2011.
 - ► The highest money growth on the analyzed sample (average YoY growth in 2010Q1-2011Q1 was about 14% and 20% of M0 and M3, respectively; compared to 2003-2009 averages of 9% and 13%).
- Besides exogenous shocks (droughts and commodity prices) the unfounded loose MP gave rise to depreciation and inflation expectations...
- ... and boosted currency speculations potentially leading to depreciation-inflation spiral.
- OGR anticipated that substantial monetary policy tightening was necessary in order to bring inflation down and halt depreciation of the shilling.



Macroeconomic Misalignment Monitor – Client and Purpose

Main client TCX

Purpose An early warning tool of sharp currency movements; helps investors and traders to identify potential currency risks

Characteristics

- "Data mining" techniques (compared to judgments in the FPAS)
- Automatic and data release driven (update triggered by new data release)

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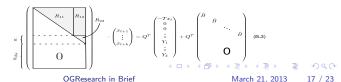
Macroeconomic Misalignment Monitor – Framework

- Decompose macroeconomic aggregates crucial for external balance into gaps and trends
 - Kalman filter of rugged edge data of different frequencies
- Estimate relation between the gaps (and their lags) on currency movements
 - Dynamic factor regression

Apply QR decomposition on the first matrix

$$Q * R = \begin{pmatrix} I & & & \mathbf{0} \\ -T & I & & \mathbf{0} \\ & -T & I & & \\ & \mathbf{0} & -T & I \\ \hline Z_{l+1} & & & \\ Z_{l+2} & & & \mathbf{0} \\ & & & & \\ & \mathbf{0} & & & \\ & & & & Z_{l+k} \end{pmatrix}$$
(B.2)

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MANTIS - FPAS and MMM on a web portal

 All our FPAS projections and MMM analyses are available on Mantis upon free registration



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Consulting

Clients IMF, EBRD, WB, central banks

Consulting on Model-based monetary policy analysis

- Monetary policy formulation
- Monetary policy regimes transitions
- Organization of internal processes
- Internal and external policy communication
- 10+ Countries Africa: Egypt, Kenya, Rwanda, Uganda, Tanzania, Mozambique
 - Post-soviet countries: Russia, Georgia, Armenia, Moldova, Tajikistan, Kyrgyzstan, Mongolia
 - Oman, Haiti

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Ad hoc research projects

Clients IMF, OECD, CZ MinFin, ...

Projects Cooperation in developing a new Debt Sustainability Framework with IMF research department

- Including necessary software development
- Implementation of extensions to IMF's Global Prediction Model
- Development of modeling framework suitable for fiscal sustainability analysis
- Research in medium-term investment strategies for emerging markets

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Qualities

Smart, reliable, and responsible people in general

In particular, advantage is if you are interested in

- Macroeconomics
- Math\Statistics
- Programming

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Positions

We have two main junior positions:

Model operators more technical job, programming basics necessary, more likely to go on missions

Analysts demanding on analytical skills, managing people, reports writing

Ultimately, we want people to **become senior economists** (i.e. country leaders, mission leaders, etc.)