MPE_AMEM: Azerbaijan 2015-2017

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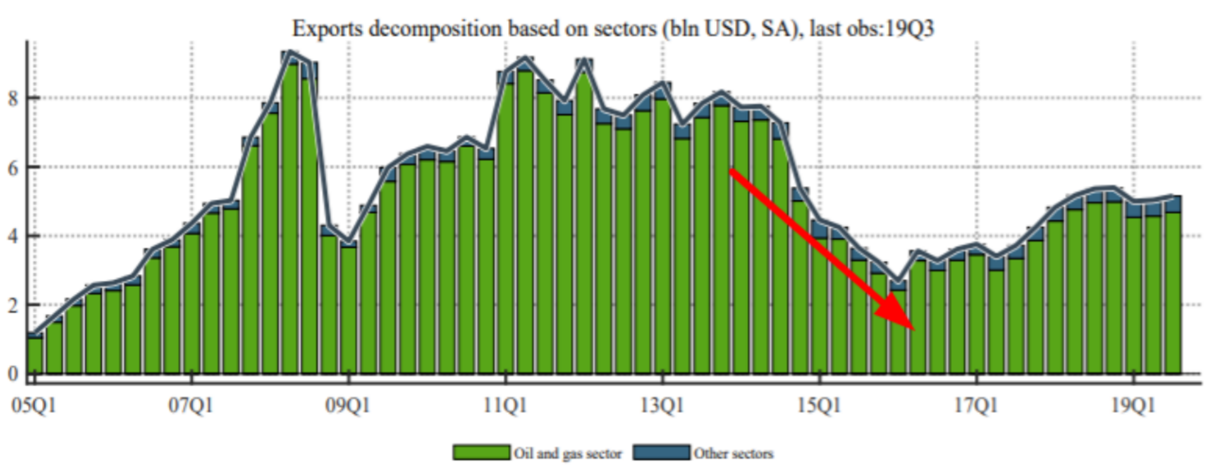
What Happened

Oil Shock

Rapid, <u>permanent</u> decline of oil price:

Large drop in export revenues:

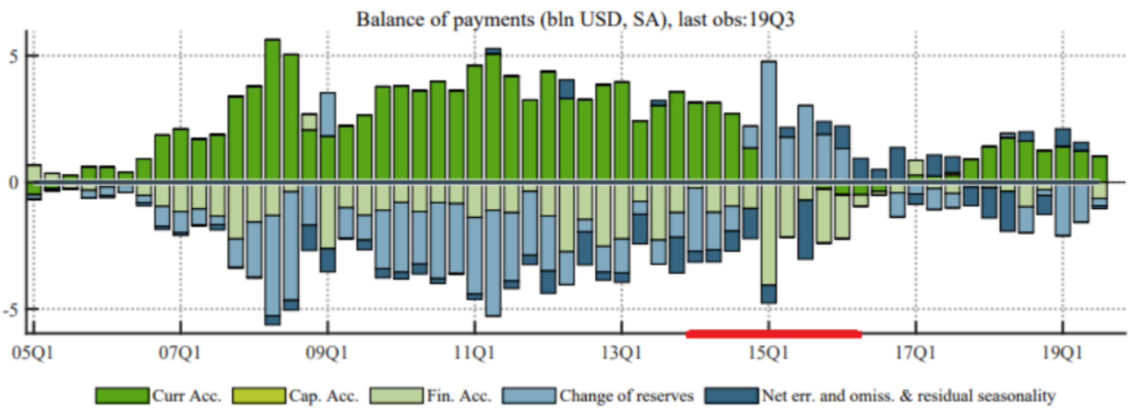


Two problems here:

- drop in fiscal revenues (austerity, decline in domestic demand)

- imbalance in the forex market

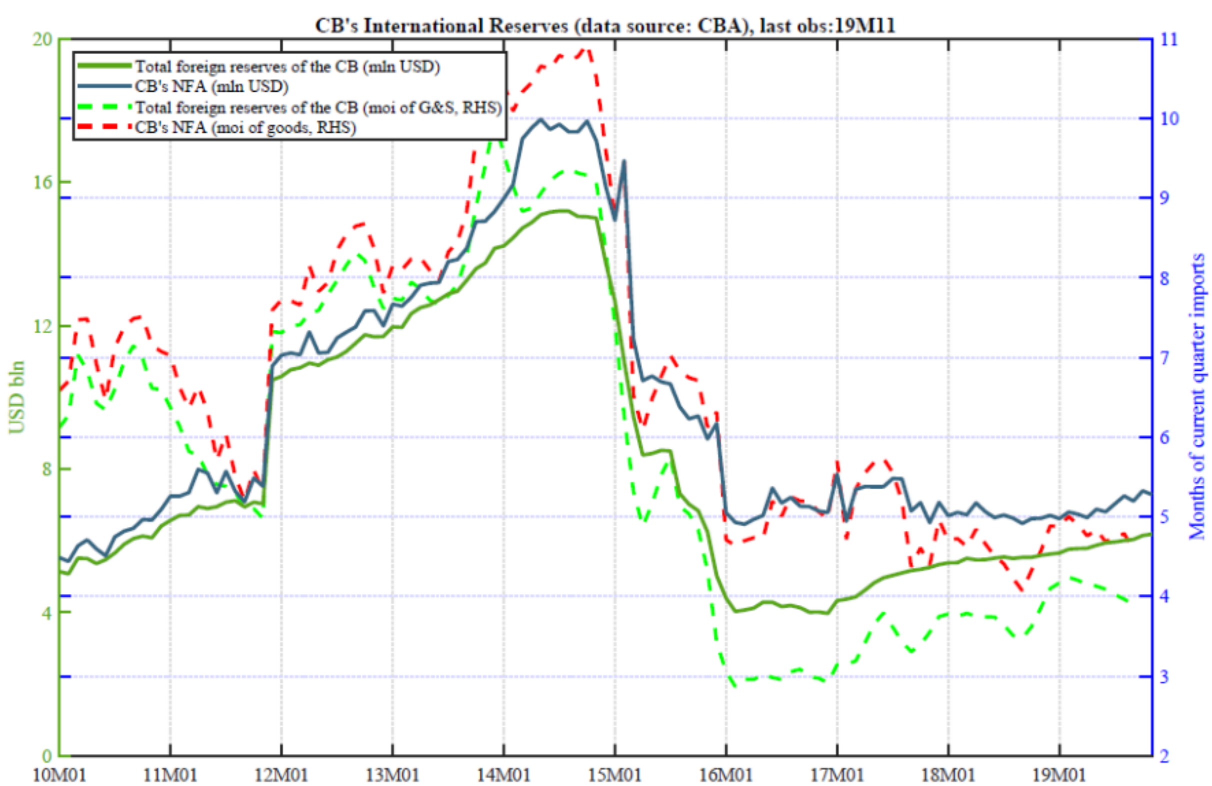
BoP problems



Note:

- CA surplus disappeared
- FA deficit (outflows) intensified:
    - Outflows before: e.g. SOFAZ investments
    - Outflows in 2015 - people trying to run away from manat
    - CBA replaced missing inflows by selling forex reserves

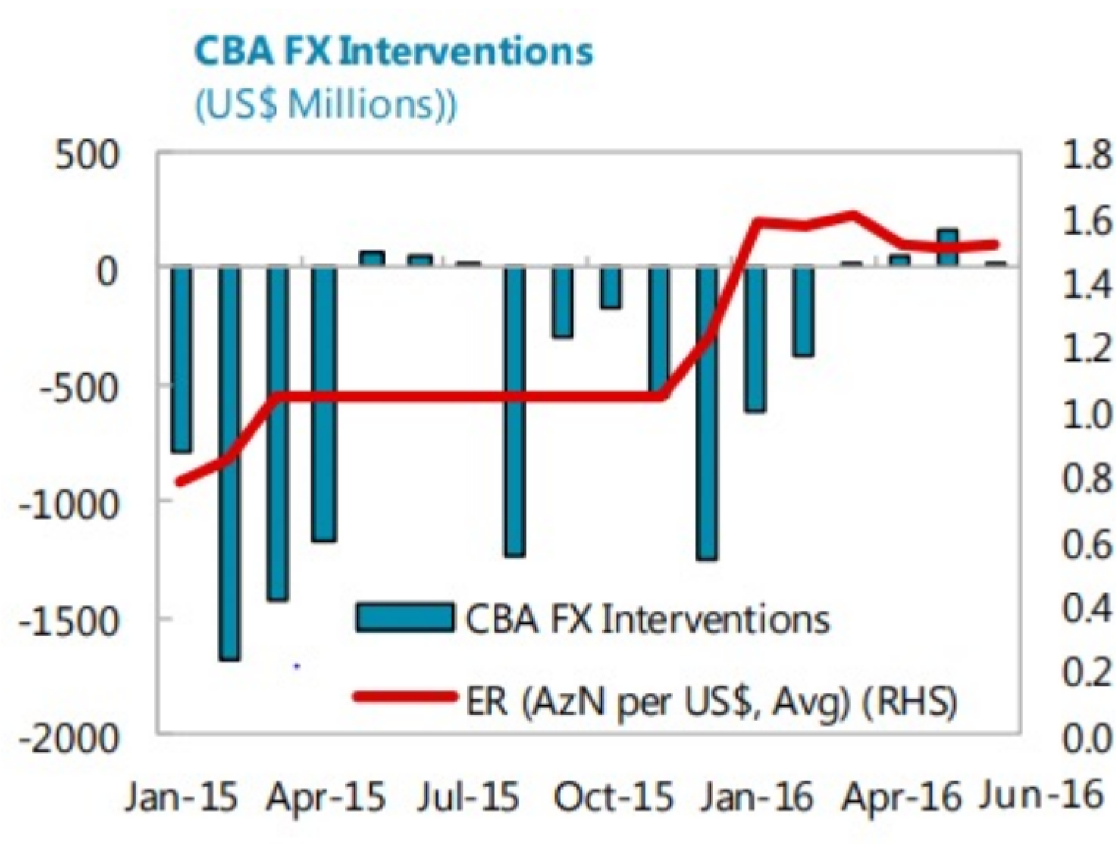
But forex reserves sales was a temporary to permanent problem:



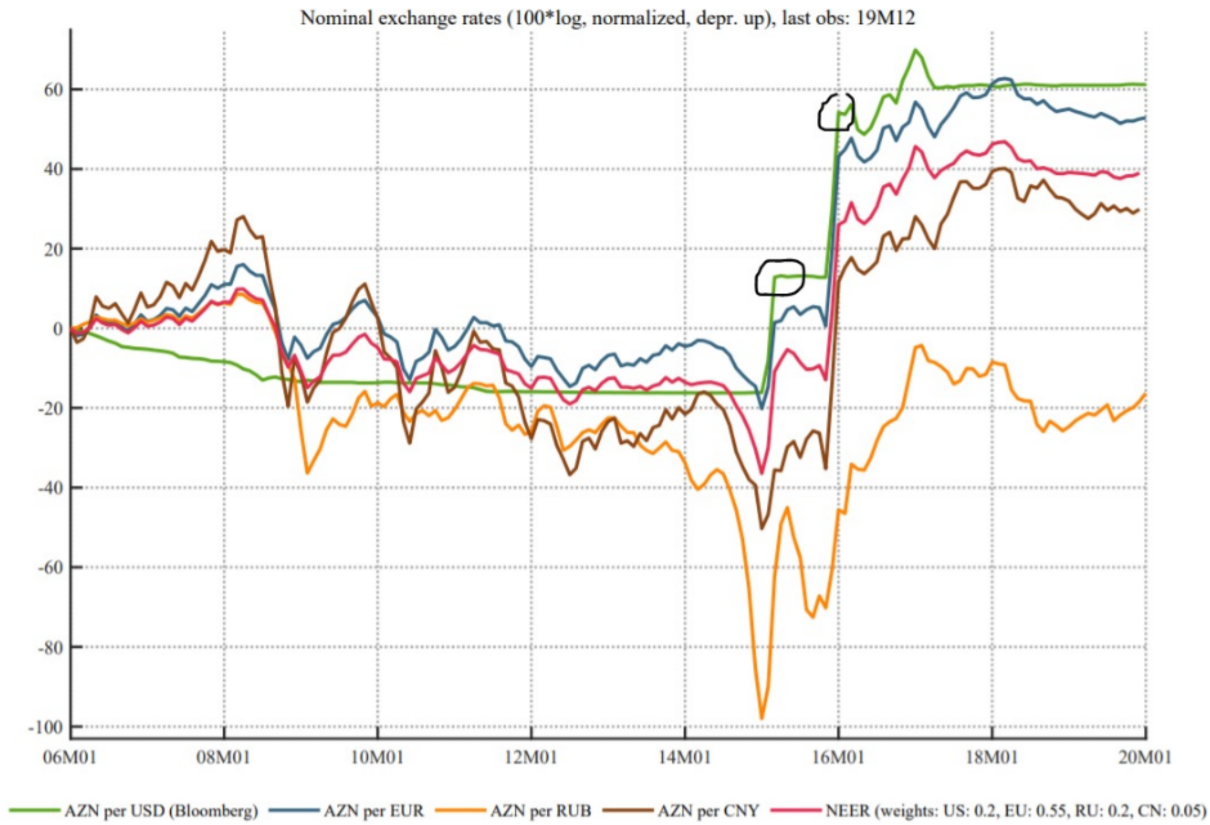
How can you solve the imbalance:

- permanently increase borrowing (from where?)
- increase exports again (how? how quickly?)
- decrease imports (how?)
    - restrictions
    - making imports more expensive
        - lower household incomes in LCY with the same FX rate
        - same household incomes in LCY with weaker FX rate

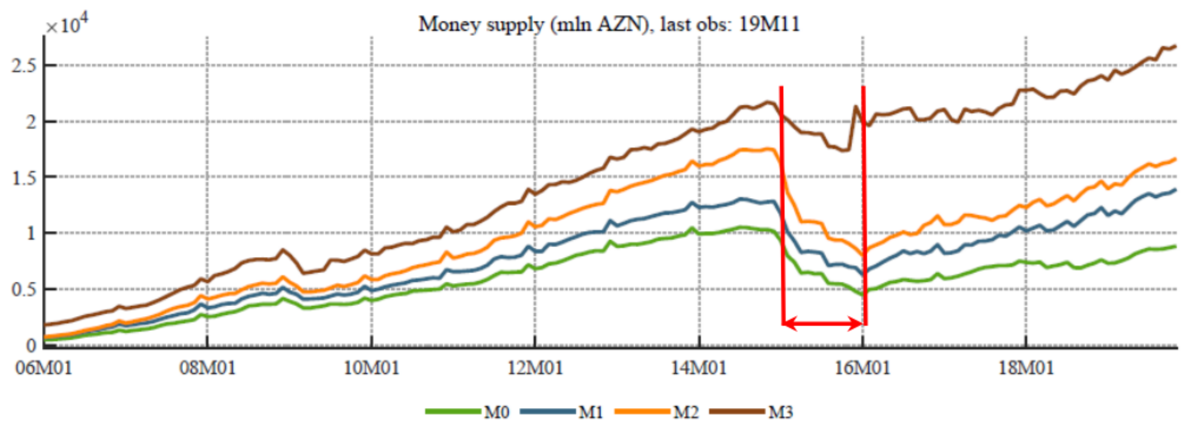
CBA Response



But eventually CBA had to allow for weaker FX rate. Why not weaker wrt Russian ruble?



Important: FX interventions are also monetary policy!

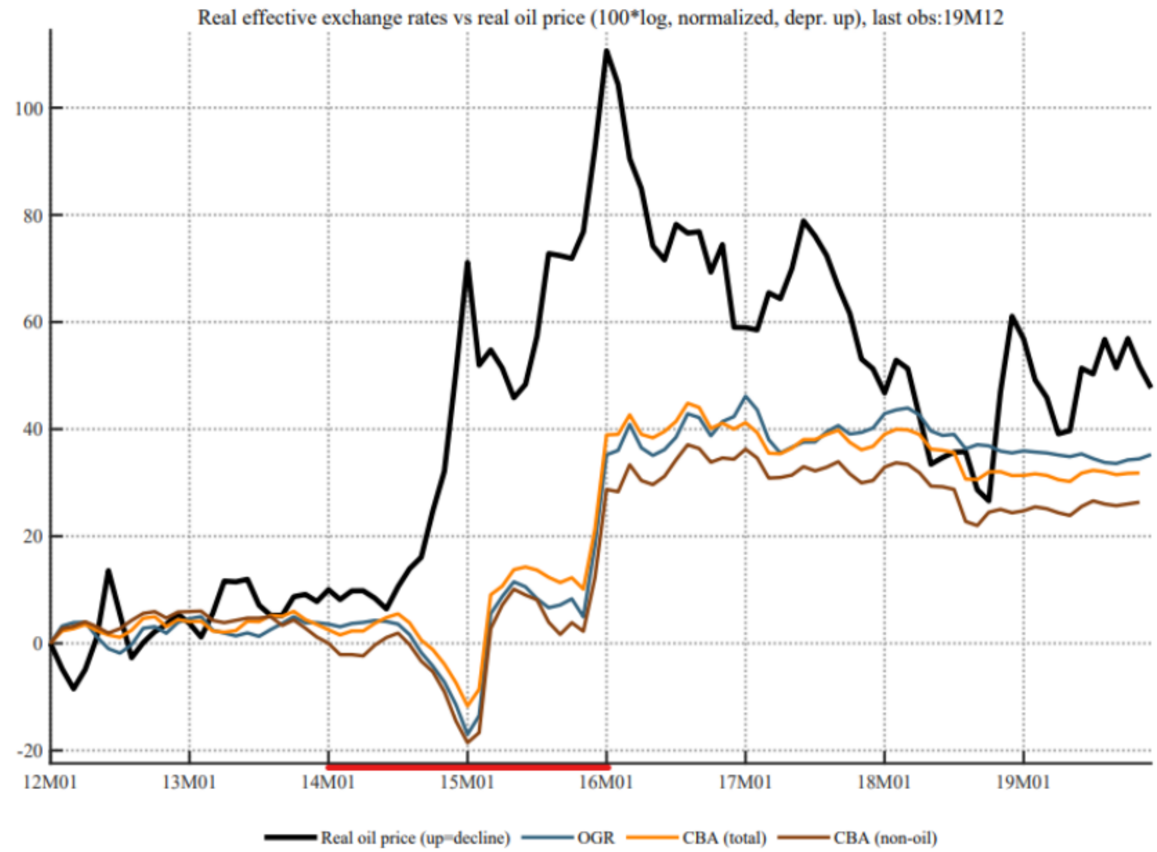


Evaluation:

- CBA postponed inevitable
- faster adjustment would have saved reserves, helped economy, shortened the crisis
    - expectations: people knew devaluation was coming, so pressure on inflation (no body wants to hold manat)
    - who benefitted from the delayed CBA reaction?
- crisis was inevitable, baked in the FX regime

Impact on REER

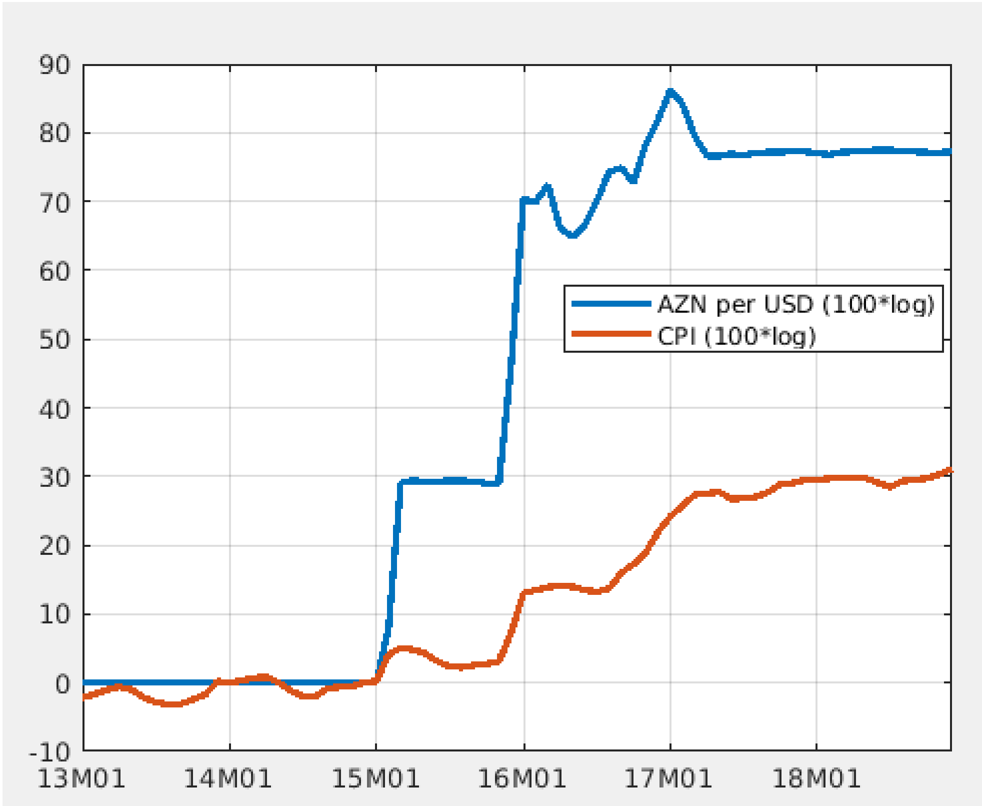
Permanent impact on REER (trend):



Does this mean that REER became heavily undervalued?

Impact on inflation / CPI

CPI change much smaller than the FX change.



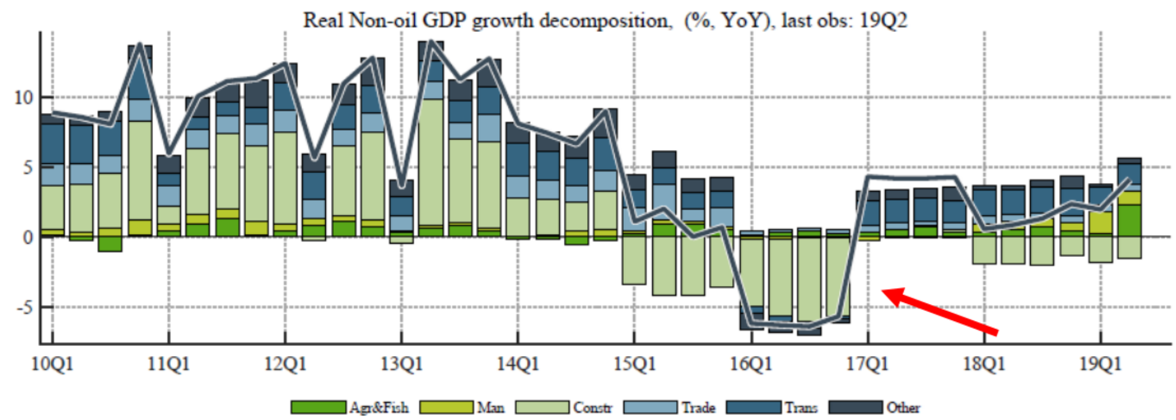
REER adjustment requires that relative prices change. Import prices went up, prices of domestic production (wages) remained low.

Very typical for the fundamental shocks. Very different from UIP / CPI target shocks. That's why estimation on data is very difficult unless you have long time series where all shocks are proportionally represented.

CBA hiked rates to calm public and control inflation expectations. Probably had not a large effect, cause of weak transmission.

Do you believe this CBA statement?
"This decision is based on the purpose of *creating additional incentives for diversification of national* economy, to reinforce international competitiveness and export potential, and therefore, to ensure the strategic sustainability of balance of payments and solvency."

Impact on growth



How to Model It

Our job is to choose a suitable combination of shocks to represent the effects above.

Oil price is part of foreign block and therefore will be imposed automatically, no need to do anything there.

We have oil effects in the model, but they will **not be sufficient to give us a good forecast:**

- model is calibrated for "normal" times, crisis is different, real world is non-linear
- model is missing some transmission channels
- model is imperfect as it is

We start with overview how variables should move

Trends

- (permanent), quick shift in REER trend level (by ?%)
- (partly temporary) increase in country risk premium
- (partly temporary) drop in potential output growth
- (temporary) increase in CPI target tp represent elevated inflation expectations

Gaps

- REER gap initially overvalued, then overshooting into undervaluation (typical pattern)
- output gap to the negative

How to do it

1. Run plain forecast: do not put any tunes. We will observe what the model + external assumptions implies.
2. Identify where the forecast goes wrong.
3. Start with trends - implement tunes, observe results.

4. Add gap tunes, observe results.
5. Repeat 2-4 until happy.

Note: Only put soft tunes, ie. shocks, do not tune trends or gaps directly (hard tunes).

Reports

Codes will generate forecast report which you can use to understand the forecast.