IS CNB TRANSMISSION MECHANISM BROKEN?

AND SHOULD CNB REALLY START SELLING ITS RESERVES?

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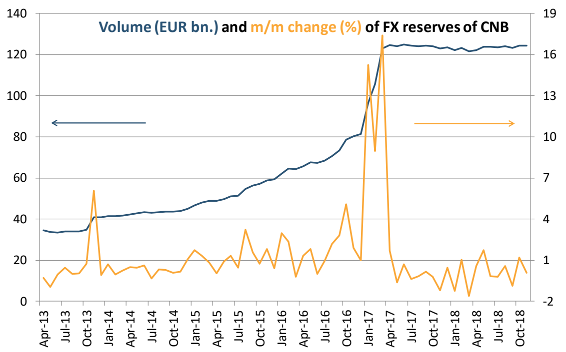
- **Komercni banka's economists argue that monetary transmission mechanism is broken…**
- **…and that only the sale of FX reserves is the remedy.**
- **Rather than well-researched and rigorously analyzed idea, it looks like a wish to bend the reality towards their incorrect EURCZK forecasts.**

The weakness of CZK has defied the analysts of commercial banks and the central bank alike throughout this year. Recall that, for instance, central bank forecast, as recently as in May ↗, that by this time of 2018 CZK will be trading at 24.60 against the euro. Or that the forecast of Komerční banka from May ↗ had CZK at 24.70 at the end of 2018. Other analysts expected, as is too often the case in the analytical community, pretty much the same – fairly large strengthening of CZK this year. Nobody was calling for CZK to be weaker – except for me, but that is hardly anything to brag about as I've been calling for weaker CZK – and even weaker than this – pretty much since the end of interventions 😉. To be humiliated by the reality differing from the forecast inevitably leads to the soul-searching among the analysts ("what did I do wrong? Why is to going in the opposite direction? What the heck is going on?" etc.). One such product of such a soul-searching made it to the frontpage of the prime local economic daily, Hospodářské noviny ↗. Unfortunately.

In the article titled "*CNB policy shall be ineffective without the sales of euros*" of December 2018 ↗ two economists of Komerční banka argued that the monetary policy transmission mechanism (henceforth "MTM") ↗, i.e. that process, characterized with long, variable and uncertain time lags, through which changes of the monetary policy of the central bank influence the economy (output, prices), is broken. And that, as a logical consequence, the "*functioning of the monetary policy in the Czech Republic is imperiled*". And that the only remedy is the "*sale of the FX reserves*" that CNB accumulated over time.

The argument goes as follows. CNB increased the interest rate 5 times this year (125 bps. in total) and yet the currency was, as authors said "*on average weaker against the euro than in 2017*[1] . Since, according to the authors of the article, CZK "should" be around 24 based on the (unspecified) model(s), the failure of CZK to strengthen must be evidence that the monetary policy transmission has broken down. And why? Well, the culprit is claimed to be the massive FX reserves of the central bank (to the tune of EUR 120 bn.) that it accumulated historically, but mainly during the last two quarters of the interventions:



SOURCE: CNB ARAD Database ↗

I will examine in detail how FX reserves are, according to authors, supposed to be thwarting the CNB's attempts to steer the economy away from (supposedly) inflationary waters.

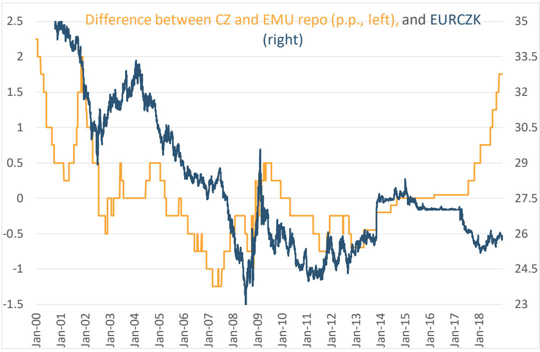
Even before we begin to dissect authors' analysis, let us note that **authors fail to specify what the optimal level of FX reserves should be in the**

[1] This is first of many inaccuracies in the article: 2017 average was 26.3, 2018 average was 25.6.

developed open economy with an independent monetary policy. In the literature, to the best of my knowledge, optimal FX reserves are analyzed only for economies without independent monetary policies (e.g., for dollarized economies) or for emerging economies with independent monetary policies (since these are susceptible to vicissitudes of the global capital flows). Maybe, nobody thought of how much is too much for a developed economy…

The only theoretical model for setting the optimal FX reserves that I know of is classical marginal cost/marginal benefit analysis where costs are opportunity costs of holding reserves and benefits are insurance benefits against potential future economic crisis. To the best of my knowledge, nobody ever claimed that the monetary policy mechanism got broken because of FX reserves being too high…If that can be the case, it is certainly worth writing an academic paper on.

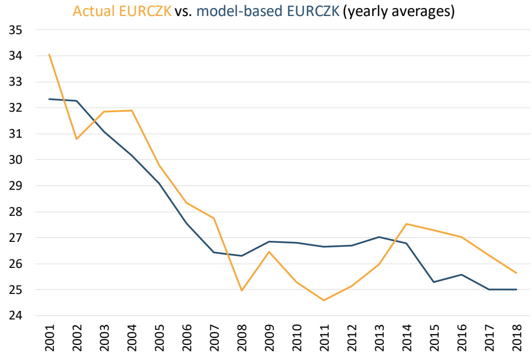
I digress. The *first* argument of the authors for the claim that MTM is broken is that "*local currency effectively ceased to respond*" to the interest rate changes, i.e. that the "*exchange rate channel*" of the monetary policy is broken. Now, they clearly didn't look at the following picture.



SOURCE: 42 FS

CZK almost never strengthens when (*nominal*) interest rate differential widens! Just the contrary, in the years before the crisis, CZK had been strengthening against the euro just as the differential between CZ and Eurozone was narrowing…The period since the end of FX interventions is, ironically, one of the very few times in the modern history during which CZK strengthened concurrently with widening differential! The picture above thus illustrates that stating that "CZK didn't strengthen despite the fact that CZ-Eurozone differential widened" has zero basis in history.

This may seem counter-intuitive but it is so. Why? **Because strengthening of the currency is driven by something else, not by wider interest rate differential.** See, once one accounts for the growth differentials, a different picture emerges, one where CZK strengthens pretty much as expected:



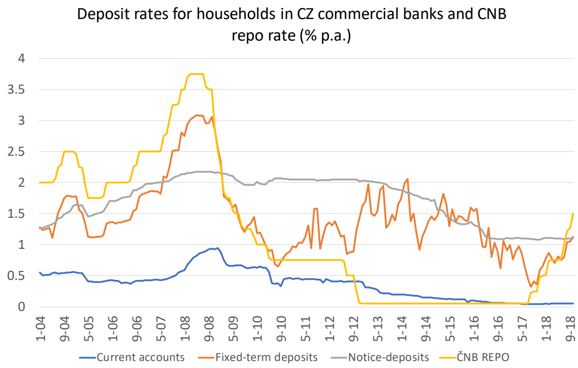
SOURCE: CNB ARAD Database ↗ Model takes into account just the differences in productivity growth.

In other words, the strengthening of the currency (i.e., the nominal convergence that, in the Czech conditions, takes the form of strengthening of the exchange rate) is driven by real convergence, that is by catching up of CZ productivity with that in Eurozone. And, put differently still, the real convergence (convergence of economic levels) produces nominal convergence (i.e., convergence of price levels) which produces stronger CZK and, hence, CNB does not need to increase interest rates much. Price levels converge via strengthening of the currency, not via higher inflation here that'd need to be tamed by higher interest rates.

By the way, the model-estimated level of EURCZK based on productivity growth (picture above) is 25.05. That is what I see CZK should be trending towards fundamentally. Current levels of 25.85 aren't far - in the big scheme of things, 3% deviation is nothing. **CZK is pretty much where it should be, fundamentally.**

Secondly, authors claim that, on top of CNB having lost control of import prices (because CZK doesn't respond to tighter monetary policy via strengthening), CNB also lost control of domestic interest rate channel. It is argued that "*excess* *liquidity in the Czech banking sector made banks not even try to entice clients to invest into banks' savings products even though CNB rates have risen*". They also claim, that "*mortgage interest rates nowadays respond to CNB tightening only very gradually*" which is again offered as proof that CNB monetary policy is less effective now. And, finally, corporations are argued to also be less responsive to (or to have escaped the sway of) CNB policy since "*they borrowed in euros or hedged before the end of interventionist regime in April 2017*". What a nonsense.

First, look at this:

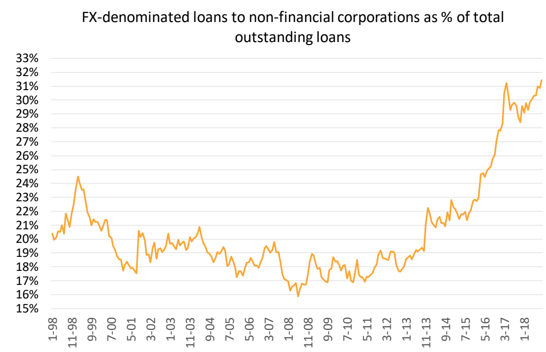


SOURCE: CNB

Rates on deposit products for households never change one-for-one with CNB repo rate, and not always even react noticeably to such changes. The exception is the (volume-wise small) category of fixed-term deposits where before the crisis we'd seen and since 2017 we've been seeing the reaction of interest rates on these products to CNB repo changes.

Secondly, regarding the mortgage interest rates. It is true that mortgage interest rates do not rise in lockstep with CNB repo, but that they respond, in authors' words, "*very gradually*" to CNB tightening is patently untrue: the index of mortgage interest rates compiled by Fincentrum rose 0.7 pp since summer 2017, repo rate rose 1.5 pp. Ignoring the fact that there is no theoretical reason why long-term rates such as mortgage ones should mirror CNB repo increases, authors clearly forget that this year was very unusual in the mortgage market. CNB, concerned with rising real estate prices, introduced, as of October 1st, 2018, new mortgage limits that, in addition to Loan-to-Value ratio limits set previously, also set the limits on debt-to-income and debt-service-to-income ratios. These limits were announced on June 12, 2018 and thus banks used the 3 ½ months between June 12 and October 1 to get as many clients onboard as humanly possible – and therefore obviously couldn't raise the mortgage rates. Before the CNB announcement, local banks were transferring higher borrowing costs onto borrowers: between June 2017 and June 2018, the above-mentioned index of mortgage rates rose by 0.5 pp. while CNB two-week repo rate rose by 0.75 pp. After the announcements, banks stopped transferring the higher costs onto borrowers for about three months. And now, they are doing it again ↗ and are expected to do so further. There is nothing unusual happening with the mortgage rates.

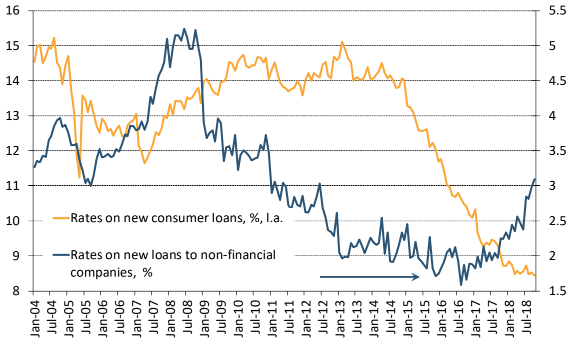
Finally, companies. This is also where authors didn't spend much time verifying their feelings. Indeed, it is true that the share of FX-denominated corporate loans in total loans outstanding rose:



SOURCE: CNB

But is 31% (as opposed to pre-intervention long-term average of 19%) really such a high proportion as to render MTM ineffective? In an economy as open to Europe as Czech one, with exports higher than 100% of GDP? If you ask me, I wonder why the share is not 50%!

And, can we concur with authors in saying that "*financing costs of companies are now much less influenced by CNB*" when we have this?



SOURCE: CNB

New loans to non-financial corporations are now 110 bps. pricier than in June 2017 (i.e., since immediately before CNB began tightening the policy) while repo is 150 bps. higher!

By the way, I am baffled as to why authors didn't choose consumer loans as their proof of broken MTM: since June 2017, and despite CNB's tightening, rates on new consumer loans actually *fell* about 100 bps… Or, maybe I know – they didn't care to look, flying in their analysis by their feelings and wishes…

…which led them to the conclusion that is completely wrong: that CNB must get rid of euros to recover its supposedly lost capacity to influence the economy. But, hey, authors see other "advantages" beyond the "repaired" MTM that would result from sale of the FX reserves: it is that "*forecasts of CZK made by CNB would be more accurate*" (!). As would, I add, be those made by anyone else, like the authors, who've been calling for much stronger CZK. **But when did pushing FX rate in whatever direction to make it conform to the forecasts become sound monetary policy authors did not bother to say**…

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