AYA Capital

SIDE – NOTE

Exchange rate determinants: “~~Crawling~~ Coaxing Peg”

Since the beginning of 2010, the Ukrainian hryvnya (UAH) has appreciated modestly, thanks to financial inflows from abroad, improved proceeds from steel and machinery export sales, and permanent support from the central bank. However, we assume that it is not the case that the exchange rate is always driven by economic factors here in Ukraine. Certainly, currencies move against one another, in order to reflect new economic realities or expectations regarding such realities. However, the pace of change varies across various regimes. In addition, it is almost obvious for Ukraine that the exchange rate is determined more by subjective factors than by fundamental ones. We argue that it is all about the “coaxing” of the ruling party by vested business communities in the parliament, banks and, indirectly, the population.

In this side-note, we are trying to:

1) theoretically estimate the significance of political determinants;
2) describe probable exchange rate regimes under different political scenarios.

- **Determination of the exchange rate suffers from marginal changes in Ukrainian politics** – the evident attributes of a “crawling peg” exist despite official declarations regarding a floating regime. Moreover, no assurances could be given that the NBU would not impose administrative restrictions on exchange rates in the future

- **We argue that there is some kind of a “coaxing” peg system, with FX rate fluctuations to be determined by behind-the scenes politics.** Under corresponding political pressure, monetary authorities are keen to use currency movements as a tool in support of the export or import industries. The devaluation in 1999 and revaluation in May 2008 are the clearest testimony to this.

- **There is evidences that countries allow currency devaluation when they have no other means to correct past lapses.** That may be the case with Ukraine, as long as basic economic sectors are currently losing their competitiveness.

- We have designed our scenario analysis method for currency exchange regime (based on our political scenarios):

1) **“Status quo”.** “Coaxing peg” regime:
   - high probability of use of FX rate as a monetary instrument;
   - continuation of “hidden” decisions - FX rate movements unlikely to be predictable. Shifting the blame for sharp currency movements between political actors probable;
   - high probability of inflationary trap, in the event of devaluation.

2) **Eastern-type power centralization.** “Crawling peg” regime:
   - high probability of use of FX rate as a monetary instrument;
   - FX rate movements will be hard to predict, due to highly possible lack of publicity;
   - the ruling party may try to prevent metamorphosis of the devaluation into inflation by imposing strict fiscal and anti-import measures.

3) **European integration / Democratic shifts.** Gradual shift to pure floating:
   - gradual development of floating regime;
   - the FX rate will be determined by fundamental market factors only;
   - in the event of artificial devaluation, the Gov may bypass additional psychological traps by giving more publicity to its action.

4) **Social unrest.** From UAH devaluation to a new regime
   - high probability of UAH devaluation at the early stage of such a political scenario;
   - The determination of a new regime will depend on the ideology and targets of the new ruling force (with a high possibility of official implementation of a crawling peg).

- **With influential political factors “hot money” disturbances exert great influence on FX rate determination in Ukraine, as well.** In spite of the NBU governors’ maintaining their belief that hot monies and international reserves are enough to curb temporary imbalances, the latter depends largely on political will.

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According to Ukrainian law, interbank rates are freely determined by financial institutions and reflect current trends in the foreign currency markets. But there's a fly in the ointment: the NBU may, in certain circumstances, restrict these exchange rates, as it did in 2008. In particular, the NBU limited the cash exchange rate for selling foreign currencies to the official exchange rate and established a maximum deviation of 3% between cash exchange rates for selling and cash exchange rates for purchasing foreign currencies in 2008.

Exchange rate determination suffers from "hypocracy" in Ukrainian politics

Although these restrictions have already been eliminated and financial institutions are currently entitled to freely determine their rates, no assurances can be made that the NBU will not impose similar or other restrictions on exchange rates in the future. **Therefore, we come back to the "good old" Ukrainian problem – "hypocracy". This concerns not only about NBU actions on the FX market, but the entire system of exchange rate determination.** For example, the most striking discrepancy is between the legal norm of the Constitution (*see below*) and the ruling regime's proclamations (*since January 2000 exchange rate has been announced to be floating by the NBU; the floating regime was officially declared in a 2008 memorandum with the IMF*). Therefore, we see the evident attributes of the "crawling peg" system, with the NBU eventually intervening in the interbank market.

Constitution of Ukraine. Article 99.

1) *The monetary unit of Ukraine is the hryvnia.*
2) *To ensure the stability of the monetary unit is the major function of the central bank of the State – the National Bank of Ukraine…*

Ukraine is certainly not alone with its crawling peg, even in Europe. **Moreover, we argue that there is a "coaxing" peg system, with FX rate fluctuations largely determined by political will and "backstage" consensus.** Certainly, it is not evident, but it looks as though the Ukrainian ruling parties, from time to time, are using currency movements as a substitute for macro- and micro-economic practices. Even before the currency wars broke out in 2010, it was quite likely that the FX rate was used as a tool to help some domestic industries in Ukraine (e.g., devaluation in 1999 was supported by the Ukrainian exporters' lobby, revaluation in May 2008 was supported by the Ukrainian importers' lobby). Therefore, the question arises: "what is next?"

Exchange rate arrangements in non-EU European countries, 1996-2010

Group	Country	Arrangements (1996 → 2010, in chronological order)
EU candidates	Albania	Floating (1992.07. –)
EU candidates	Bosnia and Herzegovina	Currency board to DM → Currency board to Euro
EU candidates	Croatia	Managed floating → Managed footing, de facto peg EUR
EU candidates	Macedonia, FYR	de facto peg to the DM/EUR
EU candidates	Montenegro	Peg DM → Euroization
EU candidates	Serbia	Peg DM → Managed floating
EU candidates	Turkey	Crawling peg to a basked → Peg to a basket → Floating
Neighbourhood	Azerbaijan	Peg to USD → Crawling peg → Euro-dollar basket
Neighbourhood	Armenia	Floating
Neighbourhood	Belarus	Peg to USD → Crawling band/managed against the RUB, later USD as well → Basket
Neighbourhood	Moldova	Peg to USD → Managed floating
Neighbourhood	Russia	USD → Floating
Neighbourhood	Ukraine	Peg or de facto peg to USD

Legend: Pag/band to USD; Peg/band to a basket; Peg/band to DM/Euro; Euro; Float

Source: the IMF and central banks reports, AYA Capital estimations

History gives credence to the thesis that countries devalue their currencies only when they have no other option to correct past economic mistakes, whether they are committed by the current ruling party of by their predecessors. The Ukrainian case may be further proof of the thesis – the country's basic economic sectors (metallurgy, engineering, chemicals) are losing their competitiveness, due to years of underinvestment and rent-seeking by asset owners. There was an obvious upswing in rising demand on Ukrainian goods after the sharp 2008 devaluation, but time passed and the delayed problems came to light again. Monetary and fiscal authorities may certainly keep in mind that a currency is the reflection of the specifics country where it is legal tender. However, chances are that Ukrainian hryvnia devaluation may be just around the corner. **With the aforementioned assumptions in mind, we present below various scenario analyses of possible actions on the exchange market,** based on our political scenarios depicted in a separate side-note.

Countries devalue their currencies only when they have no other option to correct past economic mistakes

Political scenario and its perceived probability as of Jul'11	Consequences for exchange market
"Status quo"/ Marginal changes (40%)	**"Coaxing peg"** With Ukraine losing its competitiveness on external markets, the ruling force will be more inclined to devalue UAH. However, such moves may be "hidden," as opposed to those under the centralization scenario. Moreover, as long as political actors pay attention to *vox populi*, major players can try to blame less important ones for sharp FX rate fluctuations. For instance, the NBU may shift responsibility to the Government or vice versa. That may either: 1) lead to the dismissal of a political actor, bounced out on the heels of massive protests (the "scapegoat" principle); or 2) lead to gridlock in the relationship between financial branches of power, thus further entrenching "hypocracy". Another consequence of this scenario is the high probability of an inflationary trap. This may arise as long as the Government is less likely to squeeze the budget deficit sharply and restrict imports of consumer goods under the system of marginal economic changes. In fact, the inflationary trap is highly probable, as there is a large component of imported raw materials in the exported industrial products in Ukraine, with imported goods making up a large share of total consumption. Thus, the price of these components will increase. The price of capital assets (machinery, technology, intellectual property, software) will also increase and make it more difficult for local businesses to invest in their future. Furthermore, as long as the cost of living rises, people will put pressure on their employers to increase salaries. Unfortunately, there are no examples in history in which governments and employers were completely successful in fending off such pressures.
Eastern-type power centralization (30%)	**"Crawling peg"** The scenario implies that the authorities will not take anti-oligarch actions or perform overall institutional reforms. What is more, the President and the Government may implement measures in favor of vested business interests, without considering public opinion. As long as Ukrainian economic growth is expected to be determined by nearly noncompetitive basic sectors (metallurgy, in particular), UAH devaluation is highly probable. Moreover, we suppose that the managed FX rate may often be used as a monetary instrument. Nevertheless, we assume that the ruling party will try to prevent metamorphosis of the devaluation into inflation, by imposing those strict measures that are less probable under "status quo" scenario. Such measures may include: 1) a freeze on all wages; 2) a reduction of the budget deficit; 3) "economic pact or package deals" may be signed, in which the Gov undertakes not to raise fees for public services, employers agree not to fire people or reduce wages and employee trade unions agree not to demand wage hikes and not to strike; 4) temporary anti-import protective barriers to defend the local industries and reduce inflationary pressures.

European integration / Democratic shifts (20%)	**Gradual shift to pure floating** With implementation of democratic reforms and acceptance of pro-Western institutions, the exchange rate regime will be gradually changed to pure floating. Thus, the FX rate will be determined by fundamental market factors, with only a low possibility of its use as a monetary instrument. Constitutional norms may be amended to stipulate that targeting inflation is the major function of the NBU. Forced artificial currency devaluation or revaluation may occur on the way to a floating regime. However, even in such a case, the government may avoid additional psychological traps of devaluation by giving more publicity to its action. The ruling force may announce inflation and devaluation targets well in advance. Surprisingly, the history of Israel, Argentina, Chile and some other countries suggests that this has had the following effects: 1) The business sector was able to plan its operations years in advance, to price its products properly and to protect itself by buying financial hedge contracts. Thus, the business environment became safe and predictable. This had an extremely favorable micro-economic effect. 2) The currency stabilized and displayed qualities normally associated with "hard currencies". For instance, the New Israeli Shekel – which was immediately made convertible to USD to protect its value – became a "national hit". It became a truly convertible currency – because people could predict its value over time. 3) The consistency, endurance and resilience of the governments in implementing their macro-economic agendas encouraged the populace towards a renewal of trust. Citizens began to believe their governments again. The openness of the government, the transparency of its operations and the fact that it kept its word meant a lot in restoring the proper, trusting relationship which should prevail between citizens and their governments.
Social unrest (10%)	**From UAH devaluation to a new regime** We expect interbank and cash exchange markets to be almost illiquid in case of social unrest similar to MENA-region's turmoil. Moreover there will be high probability of UAH devaluation due to: 1) unrest among the populace. Accompanied by abundant demand on cash market, squeezed supply in exchange offices and rising black and grey markets; 2) run of hot foreign money out of the country; 3) interrupted production of export goods. Accompanied by decrease in foreign exchange supply by major exporters; 4) likely decrease in liquidity of currency forward markets. In any event, this course may not last very long. The determination of a new exchange rate regime will depend on the ideology and objectives of a new ruling force. We assume that the crawling peg is the most probable one, as long as it is the most effective during times of excessive volatility (with regular and predictable intervention from the NBU).

The aforementioned scenario analysis shows the high probability of a managed exchange rate regime, with variability of its characteristics. Again, however, the fiscal authorities should remember that exchange rate management is NO substitute for macro- and micro-economic practices and policies. Moreover, positive effects of devaluation without negative consequences can only arise in an idealized – and non-existent – country. Unfortunately, most of the imports are indispensable at any price, due to the inelastic demand curve. Inflation gradually erodes the competitive advantage awarded to exporters by the devaluation preceding it. Therefore, devaluations have a tendency to create a cancerous chain reaction: devaluation-inflation followed by more devaluation and by yet more inflation.

We posit that the worst effect of devaluation is the psychological one, as the recent Belorussian course has proved. Ukraine notably succeeded in 2009-2010 to improve its atmosphere of macro-economic stability. It is a fact that the differential between the official and market exchange rates is very small now. This shows at least some sign of trust in macro-management. Within such a framework, the risks of devaluation may be worth taking only under two conditions:

Devaluation should be a part of long term macroeconomic plan with clear, OPENLY DECLARED, goals

1. The devaluation is part of a comprehensive economic program, intended to stimulate the economy and especially the export sector.
2. The devaluation is part of a long-term macroeconomic plan with clear, OPENLY DECLARED, goals. In other words, the Government and the NBU should have designed a multi-year plan (for instance, based on the IMF austerity program), stating clearly their inflation objectives and by how much they are going to devalue the currency. This is an option much more preferable than that of "shock therapy" –: keeping the devaluation secret until the last minute and then declaring it overnight, taking everyone by surprise. So says history, at least.

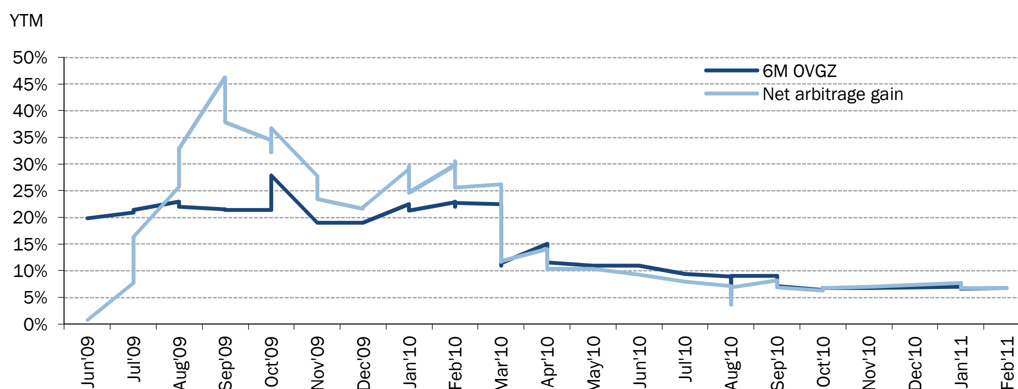
"Hot money" disturbances exerts great influence on FX rate determination in Ukraine

With influential political factors, another oft-neglected determinant for UAH arises from "hot money" disturbances. Let us look at some empirical evidence of this fact. Rates of interest remained slow to adjust after their spike in 2009. The real interest rate remained well above 10% over 2H'09-1H'10 and generated heavy pressures against the fiscal authority in attracting low-cost financial resources. The persistence of the real interest rates, on the other hand, had been responsible in attracting heavy flows of short-term financial capital over 2010, although that market behavior pattern was not the same during the entire year, moving towards a decrease in 2H'10. Nonetheless, this shape persists, in part, into 2011.

From the point of view of international finance speculators, clearly what matters is the net rate of return on financial arbitrage. This financial arbitrage can be calculated as the end result of an operation that initially converts the foreign exchange into Ukrainian hryvnya (UAH) at the initial rate of exchange, and after earning the rate of interest *R* offered in the domestic asset markets, is re-converted back to the foreign currency at the then-prevailing foreign exchange rate. Algebraically, this net gain is calculated as **(1+R)/(1+q)-1**. Thus, during the course of the operation, financial speculators who were ready to take the currency risk would gain a domestic rate of *R*, and lose/(win) at the rate of depreciation/(appreciation) of the UAH, *q*. We calculate the evolution of such gains over 2009-2011 in the figure below. Here, the main hypothesis is that the financial arbiters would financially invest their foreign monies in the domestic risk-free instrument that would bring the highest rate of return (most of the time, the 6m OVGZ – Ukrainian T-Bills). According to the calculations illustrated, Ukraine has offered rates of 25-46% during Q4 2009; 15-25% in Q1 2010; 7.5-10.0% in Q2-Q3 2010; and was one of the leading emerging markets in the world of financial speculation, while US and OECD interest rates were at 1.5-2.5% levels. Such returns enabled Ukraine to attract notable sums of speculative finance capital, with a significant "hot" component, especially during Q1 2010…

Rates of interest remained slow to adjust in 2010

Speculative financial arbitrage with risk-free Ukrainian assets



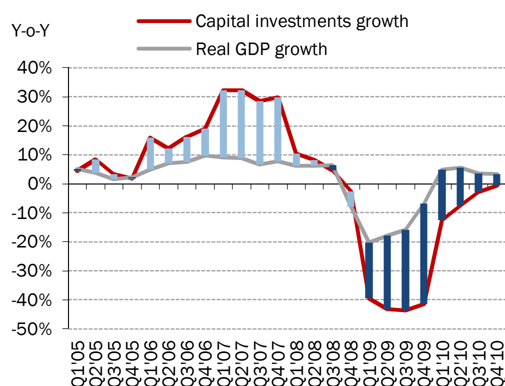
Source: IMF estimation, Econstat, MinFin, AYA estimations and calculations

Notes:

- *Net arbitrage gain = (1+R)/(1+q)-1*
- *YTM of 6M OVGZ, placed on primary auctions by MinFin, is the basis for the R estimation;*
- *q was calculated as the annualized depreciation/appreciation rate according to the difference between USD/UAH FX rate as of the auction date and OVGZ redemption date*
- *USD/UAH rate in 2011 is estimated at 7.95 for calculation of q with regard to OVGZ with redemption date after 02/02/2011*

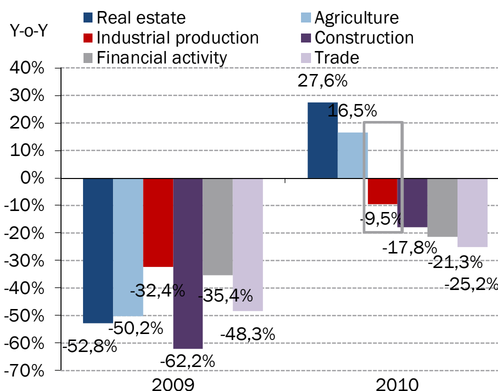
It was definitely unrealistic to expect fixed investments to be advantageously allocated to industrial activities within an economy offering such rates of return on speculative financial transactions. As a matter of fact, in the aftermath of the 2009 crisis, **growth in fixed investments destined to the manufacturing industries still stagnated,** as can be seen from the figures below.

Real GDP vs capital investments



Source: State Statistics Committee, AYA calculations

Capital investments growth by industries



Source: State Statistics Committee, AYA calculations

Case Study

Taking into account the theoretical troublesome mechanisms of the structural fragility described, we have to note the famous tri-lemma underlying an open economy– of which international economists are fond, especially after the 2008/2009 crisis. In an open economy the fiscal authorities can independently choose only one of the three following instruments: the nominal exchange rate, the interest rate, and the stock of money, leaving the determination of the other two to the interplay of market forces. Particularly, liberalization of the capital account intrinsically necessitates a higher rate of return on domestic assets, in comparison to the depreciation rate of the domestic currency. This commitment stimulates further foreign inflows, and the domestic currency appreciates, inviting an even higher level of hot money inflows into the oft shallow domestic financial markets of emerging economies. The initial bonanza of debt-financed public or private spending escalates rapidly, and aggravates the fragility of the shallow financial markets in the recipient country. Eventually the bubble bursts and a series of severe and burdensome macro adjustments are enacted through very high real interest rates, sizable devaluations, and a severe entrenchment of aggregate demand, while the short-term "hot money" flows have already rushed out of the country leaving it deprived of the traditional tools of adjustment and austerity…

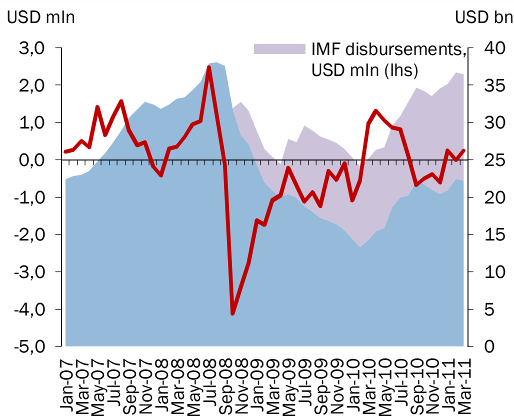
In spite of such a pattern of inflows, we positively assess NBU measures to curb the flow of hot money. Last year, the central bank took steps to monitor trade-related foreign debts incurred by domestic traders more closely, as well as to better verify the accumulation of FX by domestic exporters. Moreover, they were going to restrict inflows of hot foreign capital, by requiring that local banks block 30% of short-term funds drawn from foreign investors. While increased foreign injections have allowed the UAH to appreciate a bit in 2010, the NBU governors keep abreast of their worries about the national currency. For instance, the latter may come under strong depreciation pressure in the event that foreign investors' sentiments change for the worse and they start rapidly withdrawing their money. In the event that such a scenario comes about, we assume that the NBU will be able to arrange tough measures to constrain transfers through capital account.

NBU governors keep abreast of their worries about hot monies

However, the **NBU's ability to curb devaluation is not enough – it is also a matter of political will. The latter depends on Ukraine's future political course.** To make that more yet more clear, let us look at the latest example, when Mr. Arbuzov spoke in Jun'11 about accepting greater FX volatility. On the opposite side, there was an obvious recovery of NBU's international reserves in 2010-2011, meaning greater resources to curb excess volatility and any temporary imbalances. Gross reserves increased by 45% y-o-y in Mar'11, supported by positive central bank FX purchases and IMF SBA disbursements. Moreover, larger reserves improve the more than sufficient short-term external debt coverage (76.8% – better than global mean and median), as it is at present.

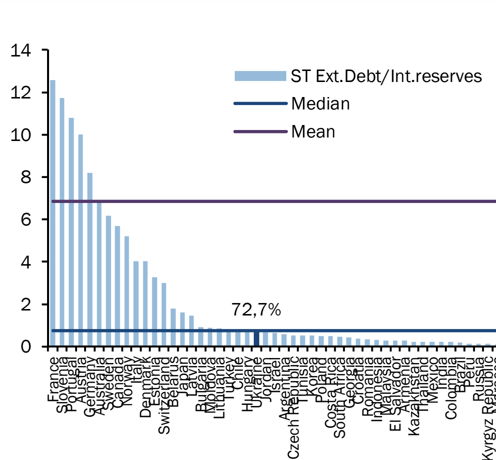
NBU's international reserves are sufficient to curb temporary imbalances, but the latter depends on political will mostly

Revival of international reserves due to FX purchases and IMF disbursements…



Source: NBU, the IMF data on transactions with the Fund, AYA calculations

… improves more than sufficient short-term debt coverage as it is



Source: the IMF, AYA calculations
Notes:
- *for the purpose of clearness some countries (GB, MT, GR, US, BE, ES, NL, FI, SK, EG, UR) are excluded from presentation not calculation due to significant value of Int.Reserves/ST Debt (between 14.8 and 61.3)*
- *ST Debt as of Q3'10 or Q2'10 e-o-p (in case if the Q3'10 data is unavailable)used*
- *Int.Reserves as of Dec'10 or Nov'10 e-o-p (in case if the Dec'10 data is unavailable) used*

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