Unwinding RON carry-trade or RON speculative attack?

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Abstract: *In the past few years there had been numerous debates on the subject of 2008' RON speculative attack. This was leading to many articles and commentaries being written, by both academic specialists and banking experts, all of which focusing on 2008' NBR's monetary policies undertaken actions and their subsequent effects on the local money markets. However, none of these papers was answering to the basic questions of what, how and why really happened on the interbank and money exchange markets those days. We will be emphasizing herewith some insights to these questions.*

Keywords: global macro investments, investments leverage, emerging markets, developing economies, international finance, cross-border investments

JEL Classification: E5; F3; G01; G15

1. Introduction

2008' RON speculative attack remains a hot topic in the Romanian banking industry marketplace even today, after five years from the asserted instance. This is still a living theme these days, mainly because of the current EUR/RON volatile exchange rate behavior, which features enduring large swings over short time periods, similar to those of autumn 2008.

During the last five years, a number of academic specialists and banking experts have devoted their time and efforts to express various opinions regarding the particulars of that RON speculative attack, all of them focusing on debating the actions undertaken by National Bank of Romania' (NBR) monetary policy market interventions and the effectiveness of their results, which have led in fact to even more debates.

One of the most complex and complete study on this subject was carrying out by Lucian Croitoru (NBR Governor's Adviser on monetary policy) in April 2011 in the article "Liquidity, speculative attack of October 2008 and the reputation of the Central Bank" Croitoru (2011). The article provides some important conclusions and remarks, inter-alia:

- during 2004-2007: Romania has experienced large foreign capital inflows; RON exchange rate against EUR have been rising by 24%, from 1EUR/4.1RON in January 2004 to 1EUR/3.1RON in July 2007; net purchases of foreign currency by Central Bank accounted for 48.5% of the foreign exchange reserve of the period;
- during 2007-2008: RON started to depreciate gradually, from 3.1RON/1EUR in July 2007 the exchange rate reached 3.73RON/1EUR in September 2008; there were noted a significant interbank system' liquidity squeeze and liquidity deficit along with the acceleration of depreciation of RON exchange rate over a relatively short time-period; in October 2008, the sales growth of RON-based swap contracts was very high in addition to a significant increase in the sales of RON on the currency market by non-residents; the October 2008 increased currency operations are much higher than the maximum recorded in 2009-2010; in 2008, the actual RON exchange rate continued to weaken during the four consecutive months after the speculative attack, although the

Central Bank has made foreign currency net sales in each of the four months; NBR has preferred to deal with the attack through the sale of foreign currency;

- during 2009-2010: during January 2009, RON' depreciation and NBR's accelerated net sales of foreign currency were even higher as those in October 2008, however they have not been accompanied by a high volatility of interbank interest rates; during January 2009, RON has depreciated from 4.03RON/1EUR to 4.3RON/1EUR, i.e. with 0.95% per trading day; in January 2009, RON had depreciated in real terms by 6% compared to December 2008 and 20.3% compared with July 2007; starting with 2009 it had been noted a significant decrease in foreign capital inflows; during 2008-2010 foreign currency net sales were 38.4% of the NBR's foreign exchange reserve of the period; most foreign currency net sales exceeding 2% of NBR's foreign currency reserves were held in a total of 10 months in the period 2008-2010; during 2008-2010 NBR have sold 83.7% of the total sales of foreign currency by the Central Bank from 1999 to 2010.

Considering the aforementioned statements, we will be emphasizing herewith the insights and mechanics of global investment and financing practices, strategies and knowledge that have been leading to those consequences on Romanian market with respect to RON rates, local banking system and local real economy. We will not focus on NBR's monetary policy actions and implications, but on elucidating the means of global financial markets developments whose aftershocks were clearly defined by the aforesaid conclusions.

2. 2004-2008' global macro outlook. The set up, unwinding and winding up of RON carry-trade

Global Macro Investment Strategies are a particular class of cross-border international investments carried out by the large-scale investment funds. These global macro strategies are targeting investments into world's high-return countries, which in most cases are incidentally related to high-interest rate countries. During 2002-2007, JPY, CHF, USD and EUR relative low-yielding interest rates were making profitable to borrow yen, francs, dollars and euros to fund activities in high-yielding currencies. These activities include investments and funding of global emerging and developing markets, such as BRIC countries, the new EU-enlarged countries (former Eastern European block), commodities and natural resources developing exporting countries (Turkey, South Africa, Egypt, etc), Asian emerging countries (Indonesia, Thailand, Malaysia, etc).

The global macro investors seek the highest returns possible provided that the investment seems to be sufficiently secure. Countries that offer the highest return on investment through high interest rates, economic growth and expansion in domestic financial markets tend to attract the most foreign capital inflows. Therefore, it is not just the interest rate itself that is important. The direction of the interest rate is acting as a good proxy for demand for the currency. High and increasing rates at the beginning of an economic expansion cycle can generate growth and value in a currency. On the other hand, low and lowering rates may indicate that a country is experiencing difficult economic conditions, which is reflected in a reduction of the currency's value. Global macro investors are borrowing yen, francs, dollars and euros at low rates and they are using these proceeds to invest in higher-returns global markets elsewhere. Hence, falling low-yielding currencies were feeding up the global currency carry-trades, which mean that the falling yens, francs, dollars and euros have helped provide the significant liquidity that has fueled the global emerging and developing markets expansion in the pre-crisis years.

Global fund managers are designing and implementing each and every cross-border investments taking into consideration lots of macro variables and parameters.

Currency carry-trade strategies are at the heart of any cross-borders investment decisions. Carry trades are not simply just exchange or interest rate arbitrages, they also have a significant temporal component. When global investors are proceeding to international investments programs, they are usually investing using leverage, meaning that they are investing borrowed capital in addition to their own funds. When leverage is used, the overall investment returns are much higher than in cases when investors are using only own capital (equity capital). However, this remains valid only if the envisaged rate differentials conditions continue to be fulfilled.

The global forex market is divided into three major currency groups based on the amount of daily trading activity and liquidity in each group. The market refers to these groups specifically as the major or reserve (USD; EUR; JPY; GBP; CHF), minor or commodity (AUD; CAD; NZD) and exotic or high-risk (BRL; MXN; THB; CNY; HKD; SGD; IDR; ZAR; RUB; INR; TRY; PLN; CZK; HUF; RON) currencies.

Exotic (or emerging markets) currency pairs features some particulars:

- they are not common in the global foreign exchange market;
- they are usually local currencies in world’s emerging and developing countries;
- they have huge bid-ask spreads;
- they are fully convertible, but their forex market is shallow;
- they are mostly illiquid, they lack market depth and they trade at significantly low volumes, being thinly traded;
- when experiencing fast price shifting, they are always facing excessive price volatility;
- their spot rates are available, but the forward market could be lacking, intermittent, or very expensive.

All these characteristics is decoding that exotic currencies are carrying out the highest risk level.

Another way to grasp the difference between major and exotic currencies (i.e. from global developed and emerging markets/economies) is to assess the central banks’ monetary policies via the benchmark interest rate guidelines. The tables below are featuring key interest rates policies between 2004 and 2009. (Table 1 and Table 2)

As can be witnessed quite easily from these key interest rates evolution during 2004-2008, Romania would be a perfect candidate for the global macro investments strategies, including RON carry-trade setting up strategies. Furthermore, Romania’s economy post-EU accession growth prospective would be consistent with the high-returns host country profile for any global macro investors’ perspective.

Hence, this is the fundamental underlying investment and economic layout that had made possible the significant Romania’s inflow of foreign capital and investments during 2004-2008. On average, the foreign capital inflows into Romania between 2004 and 2008 were around EUR 16 billion per year.

The main carrier for funding the liquidity for the entire foreign capital inflows was the RON carry-trade, which was carried against both USD and EUR. When entering into EUR/RON and USD/RON carry trade, the investors are borrowing in USD and EUR (by selling EUR and USD), converting the proceeds to RON (by buying RON) and investing in RON denominated assets. The RON-denominated assets are becoming thus the ones being carried. The RON denominated assets are covering any sort of asset classes that are potentially generating high-returns: local capital markets, local government debt securities, local real estate investments, export/import commodities transactions, and so forth.

Table 1. Major currencies key rates evolution during 2004-2009

United States	Euro Area	Japan	Switzerland
2004-06-30 1.25%	2000-06-09 4.25%	2001-03-20 0%	2006-09-14 1.75%
2004-08-10 1.50%	2008-10-15 3.75%	2006-07-14 0.25%	2006-12-14 2.00%
2004-09-21 1.75%	2008-11-12 3.25%	2007-02-21 0.50%	2007-03-15 2.25%
2004-11-10 2.00%	2008-12-10 2.50%	2008-10-31 0.30%	2007-06-14 2.50%
2004-12-14 2.25%	2009-01-21 2.00%	2010-10-05 0.10%	2007-09-13 2.75%
2005-02-02 2.50%	2009-03-11 1.50%		2008-10-08 2.50%
2005-03-22 2.75%	2009-04-08 1.25%		2008-11-06 2.00%
2005-05-03 3.00%	2009-05-13 1.00%		2008-11-20 1.00%
2005-06-30 3.25%			2008-12-11 0.50%
2005-08-09 3.50%			2009-04-12 0.25%
2005-09-20 3.75%			
2005-11-01 4.00%			
2005-12-13 4.25%			
2006-01-31 4.50%			
2006-03-28 4.75%			
2006-05-10 5.00%			
2006-06-29 5.25%			
2007-01-02 5.25%			
2007-09-18 4.75%			
2007-10-31 4.50%			
2007-12-11 4.25%			
2008-01-22 3.50%			
2008-01-30 3.00%			
2008-03-18 2.25%			
2008-04-30 2.00%			
2008-10-08 1.50%			
2008-10-29 1.00%			
2008-12-16 0%			

Source: Bloomberg (http://www.bloomberg.com), Thomson Reuters (http://www.thomsonreuters.com)

Table 2. Exotic currencies (former European Eastern block only) key rates evolution during 2004-2009

Hungary	Czech Rep.	Poland	Romania
2004-03-23 12.25%	2004-06-25 2.25%	2004-07-01 5.75%	**2004-06-07 20.75%**
2004-04-06 12.00%	2004-08-27 2.50%	2004-07-29 6.00%	**2004-07-12 20.00%**
2004-05-04 11.50%	2005-01-28 2.25%	2004-08-26 6.50%	**2004-08-05 19.25%**
2004-08-17 11.00%	2005-04-01 2.00%	2005-03-31 6.00%	**2004-08-27 18.75%**
2004-10-19 10.50%	2005-04-29 1.75%	2005-04-28 5.50%	**2004-11-02 18.25%**
2004-11-23 10.00%	2005-10-31 2.00%	2005-06-30 5.00%	**2004-11-22 17.75%**

2004-12-21 9.50%	2006-07-28 2.25%	2005-07-28 4.75%	**2004-12-20 17.00%**
2005-01-25 9.00%	2006-09-29 2.50%	2005-09-01 4.50%	**2005-01-17 16.50%**
2005-02-22 8.25%	2007-06-01 2.75%	2006-02-01 4.25%	**2005-02-14 15.75%**
2005-03-30 7.75%	2007-07-27 3.00%	2006-03-01 4.00%	**2005-03-14 14.50%**
2005-04-26 7.50%	2007-08-31 3.25%	2007-04-26 4.25%	**2005-04-11 12.50%**
2005-05-24 7.25%	2007-11-30 3.50%	2007-06-28 4.50%	**2005-08-09 8.50%**
2005-06-21 7.00%	2008-02-08 3.75%	2007-08-30 4.75%	**2005-09-22 7.50%**
2005-07-19 6.75%	2008-08-08 3.50%	2007-11-29 5.00%	**2006-02-09 8.50%**
2005-08-23 6.25%	2008-11-07 2.75%	2008-01-31 5.25%	**2006-06-28 8.75%**
2005-09-20 6.00%	2008-12-18 2.25%	2008-02-28 5.50%	**2007-02-12 8.00%**
2006-06-20 6.25%	2009-02-06 1.75%	2008-03-27 5.75%	**2007-03-27 7.50%**
2006-07-25 6.75%	2009-05-11 1.50%	2008-06-26 6.00%	**2007-05-03 7.25%**
2006-08-29 7.25%	2009-08-07 1.25%	2008-11-27 5.75%	**2007-06-26 7.00%**
2006-09-26 7.75%	2009-12-17 1.00%	2008-12-24 5.00%	**2007-08-01 7.00%**
2006-10-25 8.00%	2010-05-07 0.75%	2009-01-28 4.25%	**2007-11-01 7.50%**
2007-06-26 7.75%		2009-02-26 4.00%	**2008-01-08 8.00%**
2007-09-25 7.50%		2009-03-26 3.75%	**2008-02-04 9.00%**
2008-04-01 8.00%		2009-06-25 3.50%	**2008-03-26 9.50%**
2008-04-29 8.25%			**2008-05-07 9.75%**
2008-05-27 8.50%			**2008-06-27 10.00%**
2008-10-22 11.50%			**2008-08-01 10.25%**
2008-11-25 11.00%			**2009-02-05 10.00%**
2008-12-09 10.50%			**2009-05-07 9.50%**
2008-12-23 10.00%			**2009-07-01 9.00%**
2009-01-20 9.50%			**2009-08-05 8.50%**
2009-07-28 8.50%			**2009-09-30 8.00%**
2009-08-25 8.00%			**2010-01-06 7.50%**
2009-09-29 7.50%			**2010-02-04 7.00%**
2009-10-20 7.00%			**2010-03-30 6.50%**
2009-11-24 6.50%			**2010-05-05 6.25%**
2009-12-22 6.25%			
2010-01-26 6.00%			
2010-02-23 5.75%			
2010-03-30 5.50%			
2010-04-27 5.25%			
2010-11-30 5.50%			
2010-12-21 5.75%			

Source: Bloomberg (http://www.bloomberg.com), Thomson Reuters (http://www.thomsonreuters.com)

However, what is making the exotic RON currency carry-trade so unique is the fact that global fund managers investing in the Romanian market are practically able to secure virtually unlimited funding and capital cash-flows by simply shorting (and borrowing thus at the lowest costs) the two of the world's core-reserve currencies, the dollar and the euro. The investors operating such a cross-border investment strategy captures both the interest rates differential as well as the exchange rates differential between the low-yielding and high-yielding currencies. From the carry-trade perspective, this structure remains profitable as long as EUR/RON and USD/RON exchange rates do not shift significantly, meaning that the investment strategy is profitable as long as the interest rate differentials are higher than RON exchange rate depreciations against euro and dollar. By this means, RON has become the stronger currency against both EUR and USD during 2004-2008. (Chart 1)

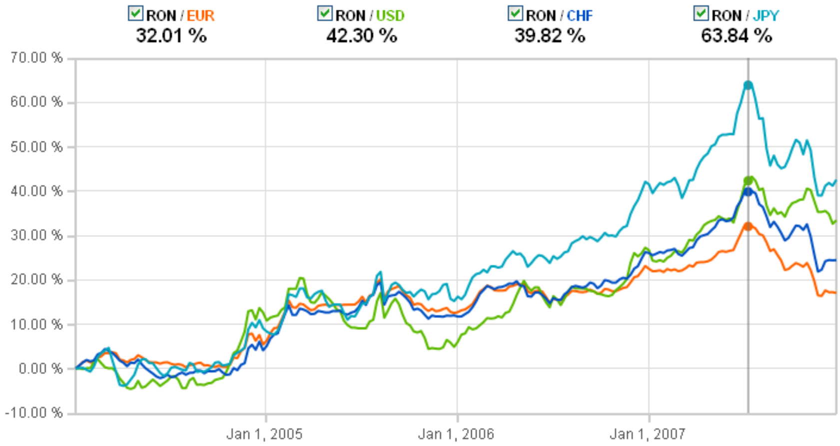

Chart 1. Exchange rates evolution (weekly chart) from Jan 01, 2004 to Jan 01, 2008
Source: Bloomberg (http://www.bloomberg.com), Thomson Reuters (http://www.thomsonreuters.com), National Bank of Romania (http://www.bnro.ro)

This entire investment process is actually behind the strong bull Romanian financial markets and economic growth between 2004 and 2008. These facts would also lead to answer to conclusions regarding 2004-2007 period from the introductory part.

Nevertheless, it is worth mentioning that the very same guiding principles and course of actions had led to foreign investments and capital inflows to the rest of countries from former European Eastern block during 2004-2008 (and on a wider extent, the exact same investment guidelines and actions were equally applied in connection with the investments to the rest of emerging and developing countries in Asia, Africa and the rest of the world). In other words, global investments into this region were all part of the same plan and all came as part of a single interconnected and interlinked developed countries foreign capital opening out to the newest European emerging markets in search for new growth catalysts.

Due to the very complex nature and intricate mechanics of global macro investment strategies into the world emerging markets and developing economies, this sort of cross-border ventures are meant to span for a long time. It needs a great deal of negative and damaging fundamentals to take place such that global macro investors relinquish their worldwide investment engagements. In spite of this, the outbreak of the international financial crisis in July 2007 and its subsequent depressing actions had been proven a crucial milestone in the modern global financial markets and international investments ecosystem. Its forceful and overwhelming behavior had led financial markets and global investors to reconsider and reshape their entire short-term and long-term investment strategies and business actions.

During the global bull market era, the riskier and higher-yielding emerging markets have been leading the international markets growth. The falling yen, francs, dollars and euros have financed much of the buying of those riskier assets. A trend reversal in any of these four major currencies would be putting the emerging markets expansion in jeopardy and it should be noticed as an early sign that the period of emerging markets leadership is ending. It should also be suggesting that investors are turning more risk-averse when investing on the global markets and economies.

Starting with July 2007, numerous global macro investors have adjusted their investment actions to adapt the global ventures to the new global macro financial framework. The first actions they have taken were to start deleveraging their investments and to start exiting from the high-risk markets and transactions they were currently being involved at that time. At the outset, this would be implying, inter-alia:

- dumping the high-yield/high-risk profile global investments and financial instruments;
- deleveraging their current financing and investment endeavors;
- unwinding exotic currency carry-trades;
- trimming down emerging markets exposures (marking the profits or cutting short the losses);
- repositioning to their core/developed global markets;
- focusing on low-yielding/low-risk but secure investments and markets in a global risk-averse investments approach.

As a result, the first losers of this new global macro environment were the world emerging markets and developing countries. When unwinding, and finally winding-up, currency carry-trades, the biggest losers are the higher-yielding currencies and the riskiest assets, such as RON and RON-based assets. On the other hand, the falling of the exotic foreign currencies is signaling weakness in their respective economies and financial markets. Thus, the emerging and developing markets have started witnessing straight away the outcomes of this shift in the global investment strategies: selling pressure on the local currency denominated assets; foreign capital outflows; local currencies depreciations; local asset prices depreciations and so forth.

The fall of Lehman Brothers on Sep 15, 2008 was the major trigger of the global financial collapse that followed. That occurrence had been leading to a global meltdown that was actually accelerating the changing landscape described above, making things to happen much faster and more abrupt than initially anticipated.

Throughout the foreign currency boom from 2002 to 2007, the yen, francs, dollars and euros were the world's weakest foreign currencies compared to the emerging countries high-yielding local currencies. However, starting with 2007-2008, those trends have reversed as risk-averse global investors have abandoned the exotic higher-yielding currencies and favoring the lower-yielding but secure major currencies. During 2004-2007, the Romanian economy was looking a lot stronger as long as RON-denominated assets were being financed by weak euros and dollars. Following July 2007, with these major currencies being no longer so cheap, Romanian assets had been starting to look a lot weaker. Starting with July 2007, Romanian financial market and real economy have witnessed ruthless foreign capital outflows and foreign investors' exodus, in line with the rest of emerging markets worldwide. The first indications of this new macro background had been seen on the local financial markets, foreign exchange, banking and stock markets. Moreover, it all started with the RON carry-trade, again.

Hence, beginning with July 2007, global macro investors had started to deleverage their Romanian based investments. This could be done only via unwinding the RON carry-trade. Unwinding RON carry-trade is actually performed by covering euro and dollars shorts by selling RON-denominated assets, which makes the dollars and euros to start rising against RON. In turn, the EUR and USD upturns would coincide with the start of the major peak in the Romanian financial market expansion and economy growth. This is because of the negative correlation between RON-denominated assets prices and EUR & USD exchange rates against RON.

Between July 2007 and September 2008, there were a moderate upturn in dollars and euros against RON, which were signaling that the RON carry-trade started to unwind. Global macro investors were being forced to start selling RON-denominated assets in order to pay back their dollar and euro overseas loans (covering their USD and EUR shorts). It can be easily noted that the rise in EUR and USD against RON from that period had coincided with the beginning of the medium-term plunge in RON-denominated assets prices (currency, stock market, real estates, and so forth). Therefore, it can be concluded that once the USD/RON and EUR/RON trend reversals are starting to shape out, RON would be transitioning from one of the strongest currencies to one of the weakest. Whereas that trend reversal continues and strengthens, the RON unwinding carry-trade would become a winding-up process, which will finally stop carrying the Romanian bull market.

In fact, starting with September 2008, RON carry-trade unwinding process has accelerated and it became much stronger, which was pushing the RON depreciation even deeper and faster than before. There are three transactions involved herein. First, the investors would borrow dollars and euros. Second, these funds would be converted into RON. Third, the proceeds would be used to buy assets denominated in the new currency. The same three transactions are performed in reverse to unwind and wind-up the RON carry-trade. First, investors must sell their RON denominated assets. Second, they must convert the proceeds back into dollars and euros by buying USD and EUR. Third, they must pay back the borrowed money. This puts downward pressure on the RON-denominated assets prices that were bought with borrowed dollars and euros and upward pressure on the USD and EUR as funds are repatriated.

Following the fall of Lehman Brothers on Sep 15, 2008, RON-denominated assets' sell-off made stronger, which caused sharp declines in their prices. Thus, RON depreciation against all four major currencies has exponentially accelerated. RON carry-trade unwinding had actually become a winding-up process, which had lasted during 2009 and 2010. It had been associated with massive foreign capital outflows; further investment and financing deleveraging; increased foreign investors seeping away; additional steep RON-denominated assets' prices decline. As a matter of fact, RON depreciation had continued at a more moderate but constant pace starting with 2011 up to 2013 due to constant and widespread investment and financing deleveraging, steady foreign capital outflows, lackluster foreign capital inflows, to name only a few. These facts would also lead to partially answer to conclusions regarding 2007-2008 and 2009-2010 periods from the introductory part. (Chart 2 and Chart 3)

3. NBR's monetary policy implications

Central Banks interventions are based on mean-reversion principles. Central banks often intervene when the currency severely deviates from the mean. The main central banks argument is the overshooting model. During speculative attacks, currencies can get into strongly overvalued or undervalued territory. Thus, it is assumed that central banks, which are trying to minimize fluctuations in their currency exchange rates, are behaving like pure speculators when intervening. As a result, they tend to buy local currency and sell foreign currency when the exchange rate is low (to support the local currency) and conversely, to sell local currency and buy foreign currency when the exchange rate is high (to depreciate the local currency). This combination of "buying low and selling high" implies that, if the central banks are succeeding in stabilizing their currencies exchange rates, this actually means that their monetary policies interventions have been successful.

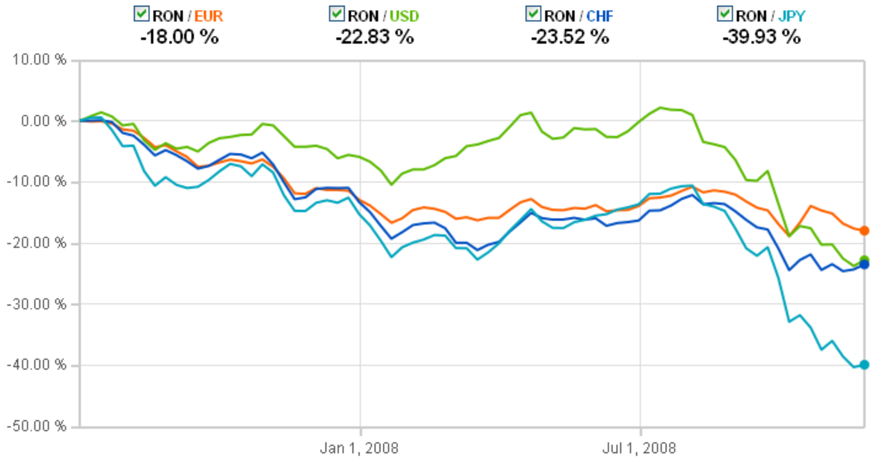

Chart 2. Exchange rates evolution (weekly chart) from Jul 01, 2007 to Nov 30, 2008
Source: Bloomberg (http://www.bloomberg.com), Thomson Reuters (http://www.thomsonreuters.com), National Bank of Romania (http://www.bnro.ro)

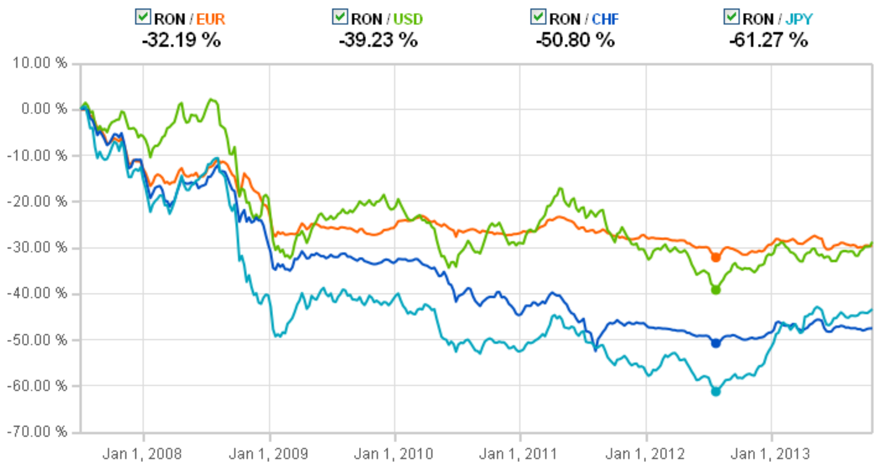

Chart 3. Exchange rates evolution (weekly chart) from Jul 01, 2007 to Oct 27, 2013
Source: Bloomberg (http://www.bloomberg.com), Thomson Reuters (http://www.thomsonreuters.com), National Bank of Romania (http://www.bnro.ro)

NBR's current monetary policy guiding principles (managed float currency regime) are in fact positioning RON as an enduring low-volatility currency within the global foreign exchange markets. This is actually preserving the overweight interest rate differential against EUR and USD, which in turn is encouraging and is keeping alive the long-term RON carry-trade investment appetite. Noteworthy, the risks involved in a currency carry-trade are related to the uncertainty of the high-yield currency exchange rate' future developments, in our case this refers to the lasting outlook of RON's appreciation or depreciation expectations. Consequently, considering the existing RON currency characteristics (interest rate differentials profile and currency volatility lookout), dealing RON against EUR and USD in the global forex markets makes RON to fall precisely into the exotic currency group of high-interest rate differential and low-volatility currency.

The global currencies carry-trades reversed sharply in 2007-2008 as global interest rate differentials narrowed, causing the low-yielding currencies to rally against high-yielding currencies. When unwinding currency carry-trades timing is of the essence. Any small exchange rate shifting of the low-yielding currency could be generating significant losses to the overall investment returns. In other words, high exchange rate volatility of the currencies involved in the carry-trade is calling automatically for unwinding of the carry-trade. Unwinding high-yielding carry-trades was a global process during 2007-2009 and after, which had been equally curtailing all global emerging markets and developing countries currencies, not just RON. In other words, all high-yielding currencies around the globe have been depreciating during this period. (Chart 4 and Chart 5)

There are substantial evidence, in global finance and macroeconomics behavior, that larger markets and developed economies have more immunity to the disruptive aspects of the currencies carry-trades, mainly due to the sheer quantity of their existing currencies compared to the amount used for foreign exchange carry-trades, whereas the collapse of any currency carry trade is often associated with a rapid appreciation of the low-yielding currency. As the low-yielding currency starts appreciating, there is pressure to cover any debts in that currency by converting foreign assets into that currency. This cycle will have an accelerating effect on currency valuation changes. When a large swing occurs, this causes a carry-trade reversal, referred as carry-trade unwinding. The timing of the global unwinding of currencies carry-trades in 2007-2008 contributed substantially to the global credit crunch, which in turn deepened the 2008 global financial crisis.

Within the global forex markets RON is acting as an exotic currency, and thus it is featuring the entire set of aforesaid shortcoming and drawback emerging markets currencies' particulars. Hence, RON's shallow forex market had virtually collapsed at the time when the hefty long-term RON carry-trade started wide spreading to unwind. Investors hustle to cover their euros and dollars shorts by massively selling RON and buying EUR and USD, focusing on securing the most favorable EUR/RON and USD/RON exchange rates by means of either spot markets or derivatives (RON swaps). Thus, RON' low-volumes thinly traded forex market, mostly illiquid, lacking spot and forward market depth had been crashed under this unwinding pressure. Consequently, RON had been trading at huge bid-ask spreads, facing excessive price volatility and experiencing fast price shifting. Ultimately, all these RON forex market deficiencies had been distorting the interbank market, triggering liquidity squeeze and weighing over the interest and exchange rates markets.

Romanian interbank liquidity shortage were determined mainly by the lack of more than a few strong local, and especially, overseas eligible trading counterparties with that to manage this kind of crises. The only real major eligible counterparties to trade RON forex with (forward contracts, swaps, etc) and exchange (buy/sell) RON currency were just a few major local-based banks. In these circumstances, Oct-Nov 2008' interbank liquidity shortfall and the subsequent jump in interbank interest rates, have led to RON being traded via foreign exchange swaps at the implied oversized local currency yields. Consequently, NBR's market operations carried out during those days, acting as last resort forex trader (foreign exchange currencies seller), lender and eligible counterparty, had been meant to curtail those atypical forex and interbank actions. However, due to the sizable RON carry-trade unwinding process started in July 2007 and its particularly step up nature during 2008 – 2010, NBR's forex market interventions had been unable to curb RON accelerated depreciation and have failed to contain the upsurge in the interbank interest rates, which had been continuing to push higher and remained challenging over the key interest rate during 2007-2010.

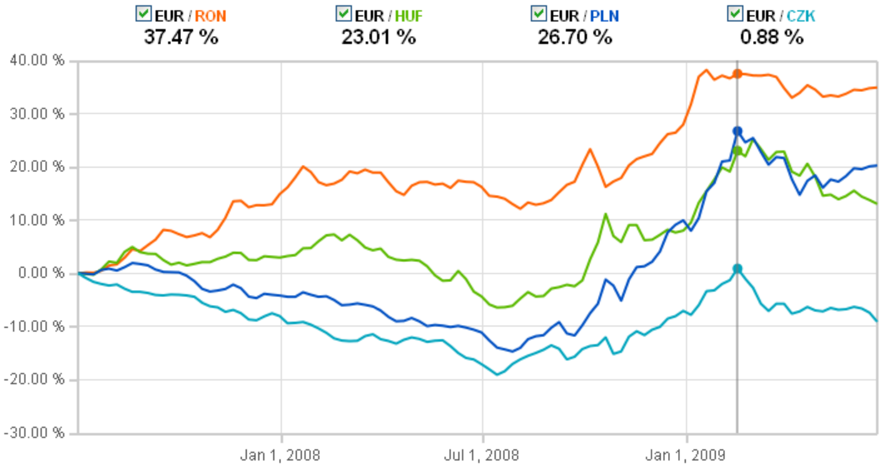

Chart 4. Exchange rates evolution (weekly chart) from Jul 01, 2007 to Jul 01, 2009
Source: Bloomberg (http://www.bloomberg.com), Thomson Reuters (http://www.thomsonreuters.com)

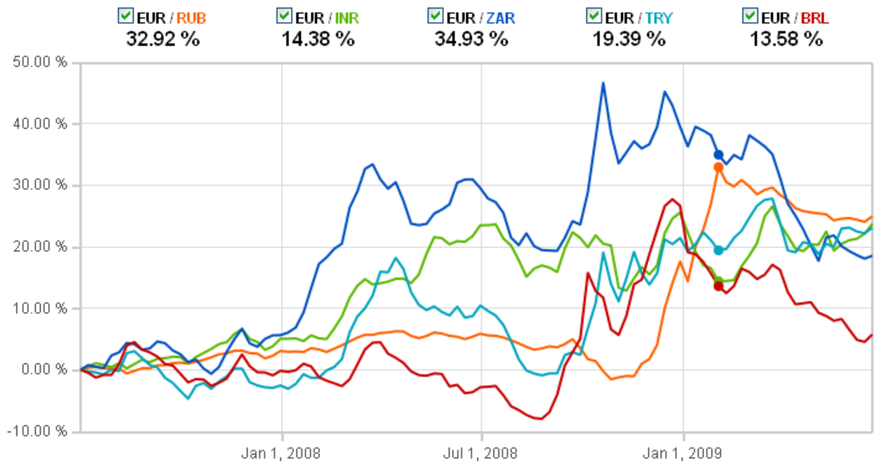

Chart 5. Exchange rates evolution (weekly chart) from Jul 01, 2007 to Jul 01, 2009
Source: Bloomberg (http://www.bloomberg.com), Thomson Reuters (http://www.thomsonreuters.com)

Furthermore, interbank liquidity scarcity and the subsequent jump in the interbank interest rates were actually inherent in the market since October 2007 and the interbank interest rates were rising and breaking well above key interest rate during October-December 2007 (around 8-8.5% p.a.), April-December 2008 (ranging between 10% p.a. and 18% p.a.) and January-December 2009 (between 10% p.a. and 15% p.a.). These facts would also lead to fully answer to conclusions regarding 2007-2008 and 2009-2010 periods from the introductory part. (Chart 6)

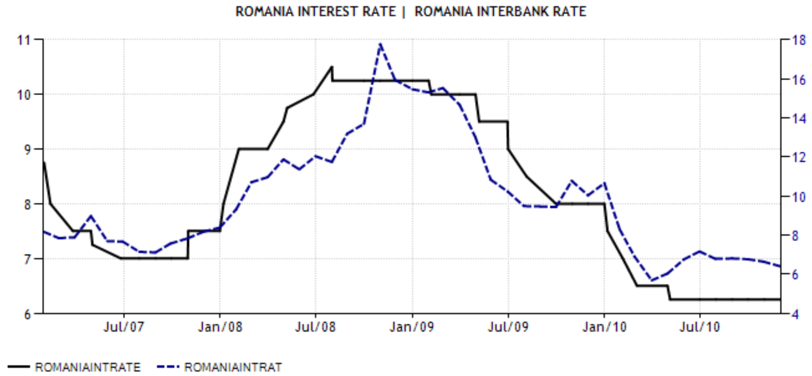

Chart 6. NBR's key interest rate vs. interbank interest rate from Jan 01, 2007 to Jan 01, 2011

Source: Bloomberg (http://www.bloomberg.com), Thomson Reuters (http://www.thomsonreuters.com), National Bank of Romania (http://www.bnro.ro)

4. Conclusions

Currency carry-trades and leveraging techniques are the backbones of any global macro investment strategies. Romanian financial market's expansion and contraction; Romanian economy's growth and decline; RON currency's appreciation and depreciation cycles are not just autonomous and standalone occurrences. They are all part of a global macro investment ecosystem and they are all interconnected and interlinked with the rest of emerging markets and developing economies course of actions.

Without ruling out the likelihood of a RON speculative attack during Oct 17 - Nov 5, 2008, we have thoroughly emphasized herein that the impact of speculatively shorting RON on the background of the massive deleveraging and RON carry-trade unwinding processes taking place during that period, would have been similar to only a drop in the ocean from Romanian foreign exchange and interbank markets perspective.

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