

THE EVOLUTION OF OTC CURRENCY DERIVATIVES MARKET

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Abstract

The exchange rate risk is the risk that affect the companies, the individuals, the banks, in a word the entire financial community. Between the opportunities that a client of a bank is been offered by the financial market is trading on OTC currency derivatives market. We asked ourselves which is the dimension of these market given the fact that in Romania we can find currency derivatives between the products and services offered by the bank but the usual clients of these banks know just a few things about them or they did not heard about it. The objective of this paper is to investigate the evolution of the currency derivative OTC market. We are interested in the changing international role of the major currencies and in the international role of the emerging markets currencies. We will focus on the evolution of the currency derivatives from the first survey realized by BIS from 1998 till April 2013.

Keywords: *banking; foreign exchange; currency; OTC market; currency derivatives*

JEL Classification: G21, G28

1. INTRODUCTION

The foreign exchange market is the only market who works 24 hours from 24 hours. A type of risk that a company has to avoid is the exchange rate risk. The banks faces this risk to by fulfilling their role as financial intermediaries. From this point of view the banks try to offer to their clients interesting instruments through which the last can hedge against the foreign exchange risk. These instruments are transacted over the counter, that means on the OTC market, the evolution of this market being the subject of an Triennial Survey realized by Bank of International Settlements (BIS) since 1995. The foreign exchange market has been the subject of BIS survey since 1989 under the eyes of Markets Committee. In this paper we try to reveal the dimension at which arrived in our days the OTC currency derivatives market based on the data provided by BIS during the years.

2. THE DIMENSION OF FOREIGN EXCHANGE MARKET

Trading on foreign exchange market is in our days necessary like the air. The importance of the foreign exchange market is revealed and highlighted by the turnover which arrived in April 2013 in average at \$5,3 trillion increasing from \$4 trillion in 2010 or \$3,3 trillion in April 2007 as we can see in table 1.

| Instrument | 1998 | 2001 | 2004 | 2007 | 2010 | 2013 |
|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Spot | 568 | 386 | 631 | 1005 | 1488 | 2046 |
| Outright forward | 128 | 130 | 209 | 362 | 475 | 680 |

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|-----------------------|------|------|------|------|------|------|
| Foreign exchange swap | 738 | 656 | 954 | 1714 | 1759 | 2228 |
| Currency swap | 10 | 7 | 21 | 31 | 43 | 54 |
| Options | 87 | 60 | 119 | 212 | 207 | 337 |
| Total | 1527 | 1239 | 1934 | 3324 | 3971 | 5345 |

Table 1. Global exchange market turnover (billion of USD)

As we can see the most actively traded instruments were the foreign exchange swaps, followed by spot transactions and outright forward.

If we look to the currency composition of foreign exchange market trading we can see that the USD remained the dominant currency, the deals in USD arriving at 87% of all deals with 2% higher than in 2010 (table 2).

| Currency | 1998 | 2001 | 2004 | 2007 | 2010 | 2013 |
|----------|------|------|------|------|------|------|
| USD | 86.8 | 89.9 | 88.0 | 85.6 | 84.9 | 87.0 |
| EUR | ... | 37.9 | 37.4 | 37.0 | 39.1 | 33.4 |
| JPY | 21.7 | 23.5 | 20.8 | 17.2 | 19.0 | 23.0 |
| GBP | 11.0 | 13 | 16.5 | 14.9 | 12.9 | 11.8 |
| AUD | 3.0 | 4.3 | 6.0 | 6.6 | 7.6 | 8.6 |
| CHF | 7.1 | 6.0 | 6.0 | 6.8 | 6.3 | 5.2 |
| CAD | 3.5 | 4.5 | 4.2 | 4.3 | 5.3 | 4.6 |
| MXN | 0.5 | 0.8 | 1.1 | 1.3 | 1.3 | 2.5 |
| CNY | 0.0 | 0.0 | 0.1 | 0.5 | 0.9 | 2.2 |
| NZD | 0.2 | 0.6 | 1.1 | 1.9 | 1.6 | 2.0 |

Table 2. The Foreign exchange market turnover by currencies (percentage shares of average daily turnover)

If we compare the first three places in this table we can see the nice evolution of Japanese yen. The 60% growth of the share of JPY in the total turnover of the foreign exchange market can be the effect of the expected change in the Japanese monetary policy where was expected a change in the exchange rate regime. The most affected currency in this statistic is the Euro which has suffered a shrunk of it's international role since the moment when in the euro area appeared the sovereign debt crisis in 2010. We can see now how vulnerable is the euro area at the non expected events that are taking place in it.

In the same direction as Euro was the evolution of GBP, CHF and CAD. Interesting is the fact that the Mexican peso and the Chinese Yuan entered in top ten most transacted currencies, over classing the New Zealand dollar. So we can say that we arrived to see currencies of emerging markets arriving in the top of the actively transacted currencies. That means that we assist at the rise of the importance of that emerging markets.

3.THE DIMENSION OF OTC CURRENCY DERIVATES FOREIGN EXCHANGE MARKET

Trading on OTC currency derivatives market is a common think for the well European developed countries, as well as for United States. Is a common practice that the bank offer

currency derivative instruments such as: swaps, forward, non deliverable forward or currency options. The interest rate contracts are today the largest segment in the global OTC derivatives market with notional amounts in a total value of \$577 trillion at end of June 2013, according to the statistical release of BIS, Monetary and Economic Department. The BIS studies revealed that the derivatives activities realized by dealers based in emerging countries are focused mainly on the foreign exchange rate risk and less on interest rate risk. The currency derivatives are transacted more in emerging markets than those based in the largest, well known derivatives markets.

According to the Triennial Central Bank Survey published by the Bank of International Settlements (BIS), trading in OTC interest rate derivatives market increased remarkable from the first survey realized in 1998 till April 2013. The data shown in table nr. 3 sustain this assumption.

| Instrument | 1998 | 2001 | 2004 | 2007 | 2010 | 2013 |
|-------------------------------------|------|------|------|------|------|------|
| FRA | 74 | 129 | 233 | 258 | 600 | 754 |
| Swap | 155 | 331 | 620 | 1210 | 1272 | 1415 |
| Options and other products | 36 | 29 | 171 | 217 | 182 | 174 |
| Total interest rate OTC instruments | 265 | 489 | 1025 | 1686 | 2054 | 2343 |

Table 3. The Evolution of OTC interest rate derivatives market by turnover (April 1998 –April 2013) in billions of USD

We can see the constant increase of swaps transactions followed by forward rate agreements and finally by options. But in the last three years the forward rate agreements (FRAs) were the OTC product with the largest increase (\$145 billion or 26%) in activity with \$2 billion turnover (15%) more than swaps (\$143 billion, a rose of 11%).

In this survey the data were collected from the central banks and other monetary authorities from 53 jurisdictions. The central banks and monetary authorities implied 1300 banks and other dealers.

If we look to the OTC interest rate derivatives market turnover by counterparty interesting is the fact that the growth of interest rate derivatives trading was induced by financial institutions other than reporting dealers, sign that more and more other financial institutions are attracted by this segment of the capital markets. Another interesting think is that the inter-dealer activity accounted in 2013 the lowest share (35%) of the total turnover since 1995 when the first data on interest rate derivatives were collected.

| Counterparty | 1998 | | 2001 | | 2004 | | 2007 | | 2010 | | 2013 | |
|------------------------------|------|----|------|----|------|----|------|----|------|----|------|----|
| | Σ | % | Σ | % | Σ | % | Σ | % | Σ | % | Σ | % |
| Reporting dealers | 150 | 56 | 323 | 66 | 494 | 48 | 800 | 47 | 896 | 44 | 816 | 35 |
| Other financial institutions | 29 | 34 | 142 | 29 | 450 | 44 | 747 | 44 | 937 | 46 | 1364 | 58 |
| Non financial | 87 | 10 | 25 | 5 | 79 | 8 | 136 | 8 | 221 | 11 | 169 | 7 |

| | | | | | | | | | | | | |
|-----------|-----|-----|-----|-----|------|-----|------|-----|------|-----|------|-----|
| customers | | | | | | | | | | | | |
| Total | 266 | 100 | 489 | 100 | 1025 | 100 | 1686 | 100 | 2054 | 100 | 2343 | 100 |

Tabel 4. The Evolution of OTC interest rate derivatives market by turnover and counterparty (April 1998 –April 2013) in billions of USD

The group who gained space on this market named other financial institutions whose market share rose up at 58%, with 12% more than in 2010 is composed from banks that are not reporting dealers, mutual funds, insurance companies, pension funds, hedge funds, special purposes vehicles and any other financial institutions which are not classified as derivatives dealers.

In the case of non financial customers, where are included non-financial corporations and governments, we can see a drop in activity with 4% from \$221 billion turnover in 2010 to \$169 billion in 2013.

We remark a constant increase for these data in their evolution. But we can say that if in 2001 the OTC interest rate derivatives turnover increased in comparison to 1998 with 83,83%, in 2003 in comparison to 2001 with 109,61% (this was the peak), in 2010 in comparison to 2007 the increase was not so higher only 21,82% (it was the effect of subprime crises), and in 2013 in comparison with 2010 the increase was even smaller 14,07%.

The other financial institutions OTC interest rate transactions turnover, whose market share rose up at 58%, with 12% more than in 2010, if we look back we can confirm that from the last survey the growth was of 45,57%. Is a good point making the comparison of the growth released in 2010 against 2007 which was only 25,82%.

If we look at the geographical distribution of the OTC interest rate derivatives market turnover, United Kingdom play the role of main financial center trading OTC interest rate derivatives followed by France, United States, Germany, Japan, Australia and Denmark (see table 5). The highest increase of the turnover was realized by the Denmark market, turnover higher with \$43 billions, followed by Germany (increase of \$32 billions) and Australia (increase of \$25 billions).

The US market was in regress with \$12 billions, that means 2%, which is in a direct correlation with the decrease in the turnover generated by the OTC interest rate derivative contracts expressed in USD and based on the US dollar interest rate. Step by step the instruments denominated in euro and the derivatives based on euro interest rate became more attractive for the investors.

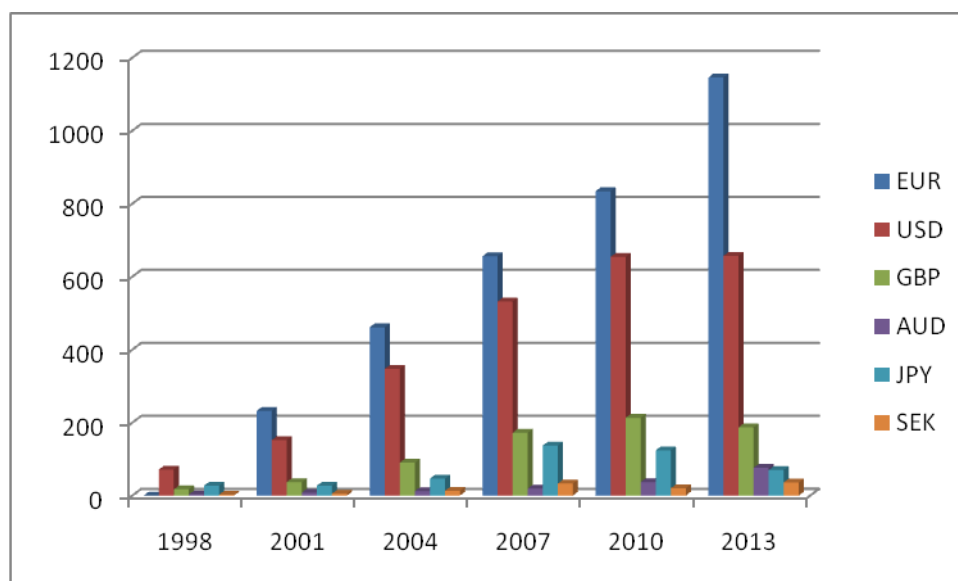
So the statement that the smaller European derivative market is unlikely to develop in a manner in which they could became major actors on these scene (Batten, 2004, p.28) is still true.

The daily average of trading in OTC interest rate derivatives increased from \$1.7 trillion in April 2007 to \$2.1 trillion in April 2010 arriving at \$2.3 trillion in April 2013. In the last three years the grow is not spectacular but the market is still increasing.

The last point of view related to the evolution of OTC interest rate market is regarding the turnover by currency, because we already made the statement that euro over classed the USD derivatives market instruments. After euro introduction, the euro market became the segment with the highest turnover on the OTC interest rate derivative market as we can see in Table 5 and Graph 1. In 2013 the euro market increased in size almost twice that the US dollar market. If usually on the European market till 1998 – 2000 the leader was GBP, today conserve its third place among the most important currencies on the OTC interest rate derivatives market. We can see a decrease of 13% in the interest rate derivatives denominated in GBP in the last three years driven by the decrease in swaps balanced a little bit by the increase in FRAs.

| Currency | 1998 | 2001 | 2004 | 2007 | 2010 | 2013 |
|----------|------|------|------|------|------|------|
| EUR | ... | 232 | 461 | 656 | 834 | 1146 |
| USD | 71 | 152 | 347 | 532 | 654 | 657 |
| GBP | 17 | 37 | 90 | 172 | 213 | 187 |
| AUD | 3 | 8 | 12 | 19 | 37 | 76 |
| JPY | 27 | 27 | 46 | 137 | 124 | 70 |
| SEK | 2 | 5 | 13 | 33 | 20 | 36 |

Table 5. The Evolution of OTC currency derivatives market by turnover and currency (April 1998 –April 2013) in billions of USD



Graph 1. The Evolution of OTC currency derivatives market by turnover and currency (April 1998 –April 2013) in billions of USD

We can remark the powerful development of Australian dollar market where we observe that the turnover doubled in the last three years and the Swedish krona interest rate derivatives market where the increase of turnover is 80%, remarkable for such a little market. So new actors start to play seriously on the OTC interest rate derivatives market in contrast with lower activity in other economies with tradition in this field.

4.CONCLUSIONS

As a result of exchange rate volatility the bankers tried to find and create financial instruments which give to the users the possibility to protect against the exchange rate risk or to profit if the exchange rate evolution is favorable. In time the OTC interest rate market developed constantly, having periods of time when we can say that exploded followed by periods in which it still increased as volume of transactions or turnover. In the last years it can be seen the way in which the inclination for an instrument changed in the favor of another one, how the geographical distribution of this market turned in a part or another. A trend is clear from our analysis, as we have underlined the euro derivatives market gained power against the US dollar derivative market. On the other hand we assist at the development of the small markets as Australia or Sweden in contrast to the freeze of other well developed countries. The surge of Forward Rate Agreements in the contrast with options interest rate offered by

banks is another point on which we have to pay attention and ask ourselves why? So this study is only a small beginning in a further research regarding the future of OTC interest rate market in countries as Romania, which in this moment practically do not exist on the OTC interest rate derivative market map.

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