Dynamics of the exchange rate in Turkey:

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Abstract:
The prime aim of this study is to analysis the impact of macroeconomic variables on the volatility of exchange rate in Turkey. For this purpose, we have applied the Pearson’s correlation and taken the data from 1992 to 2011. Our results are showing that increase and decrease the macroeconomic variables have always impact on the exchange rate. An attempt has been done to review the association between turkey exchange rate and macroeconomic variables. We have suggested that government should focus on the policies of monetary and fiscal policies for better performance.

Keywords: Macroeconomic variables, Pearson’s correlation, monetary policy, fiscal policy.

Introduction:

History of stock market of Istanbul:
Borsa Istanbul is known as the sole exchange entity. It was established with the capital of 245 US$. It is also known as the derivate market. The shareholders of Borsa Istanbul are the following: 1) 42% IMKB, 1% brokers, 0.4% IAB all members, and government of turkey. It is policy of turkey that all the shares will offered for the purpose of sale. If we see it logo then it will be look like the ottoman mark. Mostly, 321 companies are listed under the stock exchange of Istanbul. There trading houses are 09.00 to 12.00. All the trading session the prices of shares are declared. This stock market act as the crucial indicator of the national market of Istanbul. The first name of ISE is the Dersaadet securities exchange. Due to its performance no of investors were started to invest in this stock exchange.

Purpose of the stock market:
Capitalist trading cannot be possible without the contribution of stock exchange in all the domestic and international level. The stock market is the best option with the connection of the trading. Stock market is only source that individual’s persons can also be investested into the stock market. Around the world, various investors are investing into the stock exchange for the purpose of growing their economy. Most of the studies have proved that E trading is the best trading in the
world. New York stock exchange is the considered the best stock exchange in the world.

**Objectives:**
1) In this paper, we analyzed that impact of exchange rate on the inflation rate of turkey.
2) Impact of exchange rate on the interest rate of turkey
3) Impact of exchange rate on the growth of turkey.

**Hypothesis study:**
H0: There is no correlation between exchange rate and macroeconomic variables.
H1: There is association between inflation rate and exchange rate.
H2: There is association between interest rate and exchange rate.
H3: There is positive association between GDP and exchange rate.

**Turkey exchange rate:**
Literature review:
Due, P., Sen, P, Analyzed that impact of exchange rate volatility of the stock market of Malaysia. For this purpose, they had taken the data from 1998 to 2008 and applied the VECM model. They had analyzed that there is not long run relationship inflation and interest rate with the stock market capitalization. In all the process government is seen as the major participant. At the end it is concluded that government should be focused on the monetary and fiscal policy for better performance [1].

Edwards, S, Observed that impact of exchange rate volatility of the stock market of India. For this purpose, they had taken the data from 1991 to 2001 and applied the VAR model. They had analyzed that there is not long run relationship inflation and interest rate with the stock market capitalization. In all the process government is seen as the major participant. At the end it is concluded that government should be focused on the monetary and fiscal policy for better performance [2].

Edwards, S, Explored that impact of exchange rate volatility of the stock market of Pakistan. For this purpose, they had taken the data from 1999 to 2009 and applied the GARCH model. They had analyzed that there is not long run relationship inflation and interest rate with the stock market capitalization. In all the process government is seen as the major participant. At the end it is concluded that government should be focused on the monetary and fiscal policy for better performance [3].

Harberger. A, Viewed that impact of exchange rate volatility of the stock market of UK. For this purpose, they had taken the data from 1995 to 2005 and applied the OLS model. They had analyzed that there is not long run relationship inflation and interest rate with the stock market capitalization. In all the process government is seen as the major participant. At the end it is concluded that government should be focused on the monetary and fiscal policy for better performance [4].

Hoffman, M.E.S, Viewed that impact of exchange rate volatility of the stock market of USA. For this purpose, they had taken the data from 1998 to 2008 and applied the multi regression equation. They had analyzed that there is not long run relationship inflation and interest rate with the stock market capitalization. In all the process government is seen as the major participant. At the end it is concluded that government should be focused on the monetary and fiscal policy for better performance [5].

Husain, A.M., Mody, A., Rogoff, K.S,Examined that impact of exchange rate volatility of the stock market of France. For this purpose, they had taken the data from 1990 to 2010 and applied the ADF unit root test. They had analyzed that there is not long run relationship inflation and interest rate with the stock market capitalization. In all the process government is seen as the major participant. At the end it is concluded that government should be focused on the monetary and fiscal policy for better performance [6].

Meese, R., Rogoff, K, Analyzed that impact of exchange rate volatility of the stock market of China. For this purpose, they had taken the data from 1993 to 2003 and applied the bidirectional model. They had analyzed that there is not long run relationship inflation and interest rate with the stock market capitalization. In all the process government is seen as the major participant. At the end it is concluded that government should be focused on the monetary and fiscal policy for better performance [7].

Taylor. L, Explored that impact of exchange rate volatility of the stock market of Japan. For this purpose, they had taken the data from 1995 to 2005 and applied the GARCH model. They had analyzed that there
is not long run relationship inflation and interest rate with the stock market capitalization. In all the process government is seen as the major participant. At the end it is concluded that government should be focused on the monetary and fiscal policy for better performance [8].

Rabia najaf, khakan najaf, Viewed that impact of exchange rate volatility of the stock market of south Asia. For this purpose, they had taken the data from 1999 to 2009 and applied the ARCH model. They had analyzed that there is not long run relationship inflation and interest rate with the stock market capitalization. In all the process government is seen as the major participant. At the end it is concluded that government should be focused on the monetary and fiscal policy for better performance [9].

Naeem, M., & Abdul, R, Explored that impact of exchange rate volatility of the stock market of Brazil. For this purpose, they had taken the data from 1998 to 2008 and applied the VAR model. They had analyzed that there is not long run relationship inflation and interest rate with the stock market capitalization. In all the process government is seen as the major participant. At the end it is concluded that government should be focused on the monetary and fiscal policy for better performance [10].

**Theoretical framework:**

- Turkey exchange rate
- Inflation rate
- Interest rate
- GDP
- FDI
Research methods;
In this paper, we have collected the secondary data from 1992 to 2011 and checked the foreign exchange rate on the performance of inflation rate, GDP, inflation rate and interest rate. For this purpose, we have used the statistical tools for the proper results.

Data collection and analysis:
Since last few decades, it is seen that the exchange rate of Turkey was significant changes. In this paper, we compared exchange rate with the US dollar.

Various Macroeconomic Indicators in Turkey (1992-2011)

<table>
<thead>
<tr>
<th>Year</th>
<th>Exchange Rate (against $)</th>
<th>Inflation (CPI)</th>
<th>Interest Rate (Lending Rate)</th>
<th>External Debt (Current US$)</th>
<th>GDP (Current US$)</th>
<th>FDI (Current US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>22.4</td>
<td>13.8</td>
<td>17.8</td>
<td>86.87</td>
<td>267.53</td>
<td>75</td>
</tr>
<tr>
<td>1993</td>
<td>25.8</td>
<td>11.9</td>
<td>18.8</td>
<td>89.67</td>
<td>245.56</td>
<td>278</td>
</tr>
<tr>
<td>1994</td>
<td>30.36</td>
<td>6.5</td>
<td>16.4</td>
<td>93.07</td>
<td>276.05</td>
<td>551</td>
</tr>
<tr>
<td>1995</td>
<td>31.38</td>
<td>10.3</td>
<td>14.9</td>
<td>99.62</td>
<td>323.52</td>
<td>974</td>
</tr>
<tr>
<td>1996</td>
<td>32.37</td>
<td>10.3</td>
<td>15.6</td>
<td>95.18</td>
<td>356.4</td>
<td>2145</td>
</tr>
<tr>
<td>1997</td>
<td>35.43</td>
<td>8</td>
<td>17</td>
<td>94.92</td>
<td>388.35</td>
<td>2427</td>
</tr>
<tr>
<td>1998</td>
<td>36.28</td>
<td>7.3</td>
<td>13.9</td>
<td>94.8</td>
<td>410.93</td>
<td>3578</td>
</tr>
<tr>
<td>1999</td>
<td>41.3</td>
<td>13.3</td>
<td>13.6</td>
<td>98.78</td>
<td>416.26</td>
<td>2636</td>
</tr>
<tr>
<td>2000</td>
<td>43.06</td>
<td>4.8</td>
<td>12.6</td>
<td>99.14</td>
<td>450.49</td>
<td>2168</td>
</tr>
<tr>
<td>2001</td>
<td>44.92</td>
<td>5</td>
<td>12.4</td>
<td>100.25</td>
<td>460.19</td>
<td>3585</td>
</tr>
<tr>
<td>2002</td>
<td>47.19</td>
<td>3.8</td>
<td>12.2</td>
<td>98.65</td>
<td>477.86</td>
<td>5473</td>
</tr>
<tr>
<td>2003</td>
<td>48.64</td>
<td>4.5</td>
<td>11.8</td>
<td>104.83</td>
<td>507.18</td>
<td>5627</td>
</tr>
<tr>
<td>2004</td>
<td>46.57</td>
<td>3.9</td>
<td>11.6</td>
<td>117.88</td>
<td>599.47</td>
<td>4324</td>
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<tr>
<td>2005</td>
<td>45.4</td>
<td>3.9</td>
<td>10.8</td>
<td>122.58</td>
<td>721.58</td>
<td>5772</td>
</tr>
<tr>
<td>2006</td>
<td>44.08</td>
<td>4.3</td>
<td>10.9</td>
<td>120.23</td>
<td>834.05</td>
<td>7607</td>
</tr>
<tr>
<td>2007</td>
<td>45.28</td>
<td>6.2</td>
<td>11.3</td>
<td>158.6</td>
<td>951.35</td>
<td>20337</td>
</tr>
<tr>
<td>2008</td>
<td>41.28</td>
<td>6.5</td>
<td>14</td>
<td>202.94</td>
<td>1242.44</td>
<td>25484</td>
</tr>
<tr>
<td>2009</td>
<td>43.25</td>
<td>8.5</td>
<td>13.4</td>
<td>225.98</td>
<td>1215.98</td>
<td>43407</td>
</tr>
<tr>
<td>2010</td>
<td>48.37</td>
<td>10.8</td>
<td>12.3</td>
<td>249.98</td>
<td>1377.27</td>
<td>35597</td>
</tr>
</tbody>
</table>
Statistical variables analysis:
In this paper, we have analyzed the macroeconomic variables on the exchange rate with the help of Pearson's correlation by the using of SPSS.

Interest rate vs. exchange rate:
There is collection between interest rate and exchange rate and there is negative correlation exist. The value of r -0.935 shows, there is negative correlation and this correlation significant at 0.01 level.

Inflation rate vs. exchange rate:
Our results are showing that there is moderate correlation between inflation rate and exchange rate. The value of r is showing negative correlation –0.607.

GDP vs. exchange rate:
Our results are showing that there is moderate positive correlation between GDP and exchange rate. The value of r is 0.526 and significant at level 0.05.

Foreign direct investment vs. exchange rate:
There is mild positive relationship between foreign direct investment and exchange rate. The value of r is 0.443 and relationship is significant at 0.05.

Conclusion:
On the basic of given results, it is shown that there is volatility in the currency of turkey stock exchange. After the financial crisis the turkey was facing the problems of impact of macroeconomic variables on the exchange rate. Depreciation of the currency is the natural outcome. Due to deprecations, it become very big task for the investors to invest into the any country stock exchange. Depreciation of the money has impact on the stock exchange of turkey. Exchange rate has impact on the performance of the country.

Recommendation:
1) Government should be focused on the monetary and fiscal policy.

2) There must be exchange rate stability.

3) There is need of polices for the controlling the inflation and exchange rate ratio.
References:


