Effect of the Financial Crisis on Current account deficit in Iran

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ABSTRACT

Objectives. The study examined the relationship between financial crisis and current account deficit for the economy of Iran. Time series data was used from the period 1978 to 2011. Augmented Dickey Fuller Test used to check the stationary of the variables and found that all variables were stationary at first difference.

Methodology. Johansen Co-integration used to find the long relationship and found that variation of real exchange rates has positive effect on trade deficit in long run.

Findings. Error correction model indicated the convergence or divergence of the economy in short run to long run. The ECM results showed that 51% convergence occur within year.

Originality/Value. Present Paper, estimates the effects of banking crises and currency crises on imports and exports. The estimated results can be used to predict the impact of financial crises on trade of Iran, thus providing useful information for risk management to policymakers.

KEYWORDS: Financial crisis, current account deficit, error correction model

1 INTRODUCTION

Several macroeconomic crisis in developing countries in recent years have once again underscored the need for a clear understanding of the temporary and structural factors underlying a country’s current account position. In spite of the relatively extensive body of theoretical literature on the subject, there are only a few comprehensive country studies that empirically analyze the effect of macroeconomic variables on the current account deficit.

The interaction between the variation of exchange rate and current account remains critical to the formulation of an appropriate exchange rate policy and in devising the correct policy response to economic instability. However, variation of real exchange rates and current account balance typically exhibit seemingly inexplicable behavior. Modeling the behavior of real exchange rates and current account balance is one of the most challenging and enduring research areas in the literature of open economy macroeconomics. Until recently, despite their dynamic interactive characteristics, research efforts have focused on the nature of real exchange rates and current account separately.

Kim and Kim (2012) contended that an understanding of the combined dy-
namics of the real exchange rate and current account is important not only for policy modeling, but also for understanding the mechanism of 'global rebalancing.' Their study extended the existing literature by assessing the behavior of both of these variables within a consolidated holistic framework.

Following Kim and Kim (2012), the literature on exchange rates and current account can be broadly categorized into two strands. The first strand of studies conduct causality analysis between the two variables (Devereux and Genberg, (2007); Leonard and Stockman (2002)), while the second strand focuses on the combined dynamics of the real exchange rate and current account in response to different shocks (see inter alia; Alquist and Chinn (2002); Singh (2002); Chinn and Prasad (2003); Giuliodori (2004); Bussiere and Muller (2005)). Our study contributes to the second strand of literature and aims to provide a better understanding of the relationship between the variation of real exchange rates and current account in emerging countries.

In theory, Islamic finance differs significantly from conventional finance. Specifically, Sharia-compliant finance doesn't allow for speculation, and prohibits financing of specific illicit activities, doesn't also allow for the charging of interest payments (riba), as only goods and services are allowed to carry a price. At the same time, Sharia-compliant finance relies on the idea of profit-loss and thus risk-sharing, on both the liability and asset side and posits that all transactions have to be backed by a real economic transaction that involves a tangible asset. This would suggest clear differences in funding and activity structures of Islamic and conventional banks. In practice, however, Islamic scholars have developed products that resemble conventional banking products, replacing interest rate payments and discounting with fees and contingent payment structures. Chong (2009), for example, find that in Malaysia only a small portion of Islamic bank financing is based on profit-loss sharing and that Islamic deposits are not interest-free, but closely pegged to conventional deposits, a finding confirmed by Khan (2010) for a sample of large Islamic banks across several countries.(see Beck (2013)).

This paper estimates the effects of banking crises and currency crises on imports and exports. The estimated results can be used to predict the impact of financial crises on trade of Iran, thus providing useful information for risk management to policymakers.

1.1 Objectives of the Study

The present study is devoted to examine the relationship between volatility of real exchange rate and current account deficit in the economy of Iran. The objectives of our research work are as follows: 1. Explore the Long-run relationship between volatility of real exchange rate and current account deficit. 2. To investigate Short-run relationship between volatility of real exchange rate and current account deficit. 3. Policy recommendations.
After the Great Depression of the 1930s, the global financial and economic crisis was the most serious crisis. The crisis has gone far beyond the financial part and seriously affected the real economy. Despite of wide-ranging policy actions that exist in global, regional, and national levels; financial and economic strains remain critical in 2009. Almost no developing or developed country, has escaped from the effect of economic crisis; though countries that were relatively less united into the global economy have commonly been less affected.

Economists pay attention to the role played by trade in financial crises for two reasons. First, trade imbalance has been shown to be one of the important factors that trigger financial crises. Current deficits may decrease foreign reserves. As Krugman (1979) pointed out, a currency crisis is more likely to happen in an economy that does not have enough foreign reserves. Second, financial crises may be transmitted through trade linkages from an affected country to others despite the latter’s relatively good fundamentals. In explaining such contagion effects, economists have tried to identify the channels through which contagion was spread. As trade is the most obvious economic linkage between countries, much research has been devoted to this connection. While the importance of trade imbalance in triggering crises is widely accepted, there is no agreement on the importance of trade in transmitting financial crises.

Zhu (2004) investigated the factors that contribute to financial crisis contagion. They synthesize the literature on contagion by combining all major explanatory variables into an adapted gravity model. Their finding is that financial crisis contagion is positively related to trade and financial linkages and negatively related to psychic distance between crisis-originating countries and crisis affected countries, when macroeconomic fundamentals and institutional factors are controlled.

B. Eichengreen and Rose (1999) used a binary-probit model to test if bilateral trade linkages transmitted crises between industrial countries from 1959 to 1993. They discovered that the possibility of a financial crisis occurring in a country increased significantly if the country had high two-sided trade linkages with countries in crises. They deduced that trade was an important factor. Glick and Rose (1999) conducted a similar analysis with more countries from 1971 to 1997 and obtained a similar result. Forbes (2000) used a company’s stock market data to study the significance of trade in financial crises transmission, and his result also displayed that trade acted an matter role.

However, other papers have provided different answers to the problem. For instance, Baig and Goldfajn (1998) thought that trade linkage was unimportant in the East Asian Crisis because the direct bilateral trade volumes between these economies were very small. Masson (1998), analyzing the Mexican crisis and the Asian crisis, obtained similar results.

All the articles that analyzed the relationship between trade and financial

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1 For detail, see IDB (May 2009), Issue Paper on “Shaping the Post-Crisis World: Regional Implications and Coordinated Responses by Member Countries”.
crises ignored the opposite question: how did financial crises affect global trade? We allege that the effects of financial crises on trade are a prerequisite for discussing if trade transfers crises. If financial crises do not affect countries' imports and exports at all, how can financial crises be transmitted through the trade channel? So before we analyze the matter of trade in transmitting financial crises, we need to clarify the effects of financial crises on trade. It seems there is an opinion that financial crises only affect countries' imports and exports through changes in the exchange rates.

A devaluation of a national currency will grow the volume of exports and decrease the volume of imports. Classic international trade theory displays that a devaluation improves the trade balance whether the Marshall–Lerner condition is satisfied. Because in a financial crisis a country usually experienced a devaluation of its national currency, the same analysis would apply, that is, the affected countries’ imports will fall, but their exports will grow after the crises.

Furthermore, financial crises (including currency crises, banking crises, or both) could also affect trade through channels besides the exchange rate. Calvo and Reinhart (1999) showed that financial crises usually caused capital account reversal (sudden stop) and triggered an economic recession. Mendoza (2001) pointed out that in an economy with imperfect credit markets these sudden stops could be an equilibrium outcome. The economic recession decreases not only domestic demand but also total output and export capability, whereas capital outflow forces the country to increase export. Thus, if exports rise or fall after financial crises is unclear without further analysis. In the next two sections, we will analyze the effects of banking crises and currency crises on the current account deficit of Iran.

3 Material and Methods
This section briefly outlines the empirical setup by illustrating data and econometric estimation approaches used in this paper. The annual time series data for the period 1978 to 2011 were used in this study. The variables are used Current Account (CA), Logarithm of consumer price index (LCPI), Logarithm of the average GDP to the trading partners of Iran (LGDPF), Logarithm of Oil revenue (LOIL), Logarithm of Liquidity (LM2), Volatility or Variation of Real Exchange Rate (VRER).

3.1 Model of the Study
We extend the Mehrara and Moradi (2008) model by including crisis variable. We defined crisis variable is variation of real exchange rate. The baseline model
estimated here has the form:

\[ CA_t = \alpha_0 + \alpha_1 LCPI_t + \alpha_2 LGDPF_t + \alpha_3 LOIL_t + \alpha_4 LM2_t + \alpha_5 V RER_t + U_t \]  

(1)

The real exchange rate was calculated as:

\[ RER = \frac{NER}{P^*} \]

where \( P \) is the consumer price index of the domestic country, \( P^* \) the consumer price index of the foreign country, NER is the nominal exchange rate (price of the US dollar in units of local currency) and RER is the real exchange rate. An increase in the real exchange rate implies a real appreciation of the domestic currency.

### 3.2 Variation of real exchange rate to GARH model

In econometrics, autoregressive conditional heteroskedasticity (ARCH) models are used to characterize and model observed time series. They are used whenever there is reason to believe that, at any point in a series, the error terms will have a characteristic size, or variance. In particular ARCH models assume the variance of the current error term or innovation to be a function of the actual sizes of the previous time periods’ error terms: often the variance is related to the squares of the previous innovations.

Such models are often called ARCH models (Engle, 1982), although a variety of other acronyms are applied to particular structures of model which have a similar basis. ARCH models are employed commonly in modeling financial time series that exhibit time-varying volatility clustering, i.e. periods of swings followed by periods of relative calm. ARCH-type models are sometimes considered to be part of the family of stochastic volatility models but strictly this is incorrect since at time \( t \) the volatility is completely pre-determined (deterministic) given previous values. Suppose one wishes to model a time series using an ARCH(q) process. Let \( \varepsilon_t \) denote the error terms (return residuals, with respect to a mean process) i.e. the series terms. The random variable \( v_t \) is a strong White noise process. The series \( \varepsilon_t \) is modelled by

\[ \varepsilon_t = v_t \sqrt{a_0 + \sum_{i=1}^{q} a_i \varepsilon_{t-i}^2} \]

\( \delta^2_{v_t} = 1 \quad a_0 > 0 \). If an autoregressive moving average model (ARMA model) is assumed for the error variance, the model is a generalized autoregressive conditional heteroskedasticity (GARCH, Bollerslev (1986)) model. In that case, the GARCH \( (p, q) \) model (where \( p \) is the order of the GARCH terms \( h_t^2 \) and q is the order of the ARCH terms \( \varepsilon_t^2 \)) is given by:

\[ \varepsilon_t = v_t \sqrt{h_t} \quad \delta^2_v = 1 \quad a_0 > 0 \quad h_t = a_0 + \sum_{i=1}^{q} a_i \varepsilon_{t-i}^2 + \sum_{i=1}^{p} \beta_i h_{t-i}^2 \]  

(2)

Generally, when testing for heteroskedasticity in econometric models, the best test is the White test.

### 3.3 Unit Root Test

Stationary, is determined as a high quality of a procedure in which the mathematical factors (mean and conventional deviation) of the procedure do not

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for hedging against exchange rate risk. The hedging markets, in turn, arguably affect the desired extent of exchange rate flexibility for a given economy.(see Gadanecz (2013))
modify with time. Stationary process is relative term not an absolute term. Stationary process is mostly seen only in long run sample size in which frequency of the data is high. Unit root test check the stationary of the model. On the integrated order of the variable we decide the appropriate technique to find the relationship between the variable. There are different test to check the integrated order of the variables. In this study Augmented Dickey Fuller (ADF) and Philips-Perron were used.

The ADF test tests the null hypothesis that a time series $y_t$ is $I(1)$ against the alternative that it is $I(0)$, assuming that the dynamics in the data have an ARMA structure. The ADF test is based on estimating the test regression

$$
\Delta y_t = \beta' D_t + \phi y_{t-1} + \sum_{j=1}^P \psi_j \Delta y_{t-j} + \epsilon_t
$$

where $D_t$ is a vector of deterministic terms (constant, trend etc.). The $P$ lagged difference terms, $\Delta y_{t-j}$, are used to approximate the ARMA structure of the errors, and the value of $P$ is set so that the error $\epsilon_t$ is serially uncorrelated. The error term is also assumed to be homoskedastic.

Phillips and Perron (1988) developed a number of unit root tests that have become popular in the analysis of financial time series. The Phillips-Perron (PP) unit root tests differ from the ADF tests mainly in how they deal with serial correlation and heteroskedasticity in the errors. In particular, where the ADF tests use a parametric autoregression to approximate the ARMA structure of the errors in the test regression, the PP tests ignore any serial correlation in the test regression. The test regression for the PP tests is

$$
\Delta y_t = \beta' D_t + \pi y_{t-1} + \epsilon_t
$$

where $\epsilon_t$ is $I(0)$ and may be heteroskedastic.

### 3.4 Johansen Co-integration

The Johansen tests are called the maximum eigenvalue test and the trace test. The Johansen tests are likelihood-ratio tests. There are two tests: 1. the maximum eigenvalue test, and 2. the trace test. For both test statistics, the initial Johansen test is a test of the null hypothesis of no cointegration against the alternative of cointegration. The tests differ in terms of the alternative hypothesis. The maximum eigenvalue test examines whether the largest eigenvalue is zero relative to the alternative that the next largest eigenvalue is zero. The first test is a test whether the rank of the matrix $\Pi$ is zero. The null hypothesis is that $\text{rank}(\Pi) = 0$ and the alternative hypothesis is that $\text{rank}(\Pi) = 1$. For further tests, the null hypothesis is that $\text{rank}(\Pi) = 1, 2, \ldots$ and the alternative hypothesis is that $\text{rank}(\Pi) = 2, 3, \ldots$ In more detail, the first test is the test of $\text{rank}(\Pi) = 0$ and the alternative hypothesis is that $\text{rank}(\Pi) = 1$. This is a test using the largest eigenvalue. If the rank of the matrix is zero, the largest eigenvalue is zero, there is no cointegration and tests are done. If the largest eigenvalue $\lambda_1$ is greater than zero, the test continues.

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4The Dickey-Fuller tests are simulated on the assumption that the alternative is a random walk, with or without drift terms, and that the residual process is white noise. The test is quite sensitive to the presence of a negative MA(1) process (-1). The KPSS test has as the null that the variable is stationary, $I(1)$. The DF-test has as the null that the variable is integrated. The KPSS test is perhaps better, if there is a priori knowledge suggesting $I(0)$ as a reasonable maintained hypothesis. The Perron test has $I(1)$ as the maintained hypothesis, like the ADF-test, but allows for segmented deterministic trends in the alternative. The alternative in the ADF-test allows only for deterministic trends, linear or quadratic, over the sample period.
Table 1: Philps-Perron at level and 1st Difference

<table>
<thead>
<tr>
<th>Variables</th>
<th>level</th>
<th>1st Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Individual intercept</td>
</tr>
<tr>
<td>vrer</td>
<td>-8.97</td>
<td>-8.86</td>
</tr>
<tr>
<td>CA</td>
<td>-1.75</td>
<td>-2.78</td>
</tr>
<tr>
<td>LGDPF</td>
<td>-1.83</td>
<td>-0.18</td>
</tr>
<tr>
<td>LINF</td>
<td>-0.62</td>
<td>-1.28</td>
</tr>
<tr>
<td>LOIL</td>
<td>0.08</td>
<td>-2.26</td>
</tr>
<tr>
<td>LM2</td>
<td>1.36</td>
<td>-1.21</td>
</tr>
</tbody>
</table>

Source: E views 7

Table 2: Augmented Dickey Fuller (ADF) at level and 1st Difference

<table>
<thead>
<tr>
<th>Variables</th>
<th>level</th>
<th>1st Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Individual intercept</td>
</tr>
<tr>
<td>vrer</td>
<td>-9.17</td>
<td>-9.14</td>
</tr>
<tr>
<td>CA</td>
<td>-1.95</td>
<td>-2.91</td>
</tr>
<tr>
<td>LGDPF</td>
<td>1.83</td>
<td>-0.18</td>
</tr>
<tr>
<td>LINF</td>
<td>-1.06</td>
<td>-1.68</td>
</tr>
<tr>
<td>LOIL</td>
<td>0.08</td>
<td>-2.20</td>
</tr>
<tr>
<td>LM2</td>
<td>1.64</td>
<td>-2.52</td>
</tr>
</tbody>
</table>

Source: E views 7

is nonzero and the rank of the matrix is at least one, there might be more cointegrating vectors. Now test whether the second largest eigenvalue $\lambda_2$ is zero. If this eigenvalue is zero, the tests are done and there is exactly one cointegrating vector. If this eigenvalue is not zero and there are more than two variables, there might be more cointegrating vectors. If the second largest eigenvalue $\lambda_2$ is nonzero, there might be more cointegrating vectors. Now test whether the third largest eigenvalue $\lambda_3$ is zero. And so on until the null hypothesis of an eigenvalue equal to zero cannot be rejected.

The advantage of this method compared to other methods is that: 1. This test compared to what explanatory variables and which are not sensitive. 2. The test is capable of detecting more than one long-run relationship between the variables as well.

4 Results

To illustrate the PP and ADF tests procedure, consider testing for a unit root in the logarithm of some variables:

The above table shows results of ADF and Philps-Perron tests of the variable at a level which indicate all variables except variation of real exchange rate (vrer) are non-stationary at level, but the variables at first difference which indicates all variables are stationary at first difference. Now, the results of GARCH
test show that: According to Schwartz-Bayesian and Akaike criteria, AR model with two lags during the study period were as the optimal model to estimate the behavior of real exchange rate. The table 3 show that the model is appropriate. The table 4 show ARCH-LM test. The null hypothesis is equal variance of residuals, with respect to F statistic reject the null hypothesis. According to

Table 3: The estimate of Real exchange rate model.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Co-efficient</th>
<th>t-statistic</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lrer(-1)</td>
<td>1.35</td>
<td>8.5</td>
<td>0.000</td>
</tr>
<tr>
<td>Lrer(-2)</td>
<td>-0.46</td>
<td>-3.3</td>
<td>0.002</td>
</tr>
<tr>
<td>c</td>
<td>0.96</td>
<td>1.52</td>
<td>0.139</td>
</tr>
</tbody>
</table>

F-statistic= 88.05 R-squared=0.86

Source: E views 7

Schwartz-Bayesian and Akaike criteria, GARCH (1,1) model to estimate as the optimal model. In GARCH (1,1) model, conditional variance of residuals defined as uncertainty index and fluctuations variable that we used to the variation of real exchange rate variable. It tells that long run relationship exists or

Table 4: ARCH-LM test.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Co-efficient</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-statistic</td>
<td>3.82</td>
<td>0.06</td>
</tr>
<tr>
<td>Obs* R-squared</td>
<td>3.61</td>
<td>0.05</td>
</tr>
</tbody>
</table>

Source: E views 7

Johansen co-integration used when the integrated order of the variable same i.e. I (1). It fellows two test 1. Rank Test; 2. Maximum Eigen Values Test. The table 6 shows the result of Trace test. The trace statistics is 198.64 which indicate the rejection of none* hypothesis. Second trace statistics is 115.85 and critical value is 69.81 which also reject the hypothesis of at most 1* and probability is 0.000 which also shows rejection of null hypothesis. All results show that there are four co-integration equations. That shows there is existence of long run relationship between current account deficit and budget.

The table 6 shows the result of Maximum Eigenvalue. The Maximum Eigen statistics is 0.94 which indicate the rejection of none* hypothesis. The second
Table 6: Trace Test Statistics and Maximum Eigenvalue test

<table>
<thead>
<tr>
<th>Hypothesized no of CE(s)</th>
<th>Trace Statistics</th>
<th>Maximum Eigen Statistics</th>
<th>0.05 Critical Values</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>None*</td>
<td>198.64</td>
<td>0.94</td>
<td>95.75</td>
<td>0.000</td>
</tr>
<tr>
<td>At most 1*</td>
<td>115.85</td>
<td>0.78</td>
<td>69.81</td>
<td>0.000</td>
</tr>
<tr>
<td>At most 2*</td>
<td>72.48</td>
<td>0.68</td>
<td>47.85</td>
<td>0.0001</td>
</tr>
<tr>
<td>At most 3*</td>
<td>40.21</td>
<td>0.60</td>
<td>29.79</td>
<td>0.002</td>
</tr>
<tr>
<td>At most 4</td>
<td>14.17</td>
<td>0.36</td>
<td>15.49</td>
<td>0.07</td>
</tr>
</tbody>
</table>

Source: E views 7

Maximum Eigen statistics is 0.78 and critical value is 69.81 which reject the hypothesis of at most 1* and probability is 0.000 which also shows rejection of null hypothesis. Similarly the Maximum Eigen statistics of third Maximum Eigen test is 0.68 and the value of probability of this test at most 2* is 0.0001 which lead to reject the Null Hypothesis. The fourth Maximum Eigen statistics is 0.60 and critical value is 29.79 which also reject the hypothesis of at most 3* and probability is 0.002 which also shows rejection of null hypothesis. The value of Maximum Eigen statistics and critical value at most 4 are 0.36 and 15.49 respectively with probability value of 0.07 indicate that the null hypothesis accepted. All results show that there are four co-integration equations. That shows there is existence of long run relationship between the variables.

Error Correction Model: To check short run relationship this model is used. Sargan initially made use of this model and then made popular by Granger and Engle which necessarily mean of fixing the behavior of short run for variable of economics with its behavior of long run. In ECM \( \Delta Y_t = \beta_0 + \beta_1 \Delta X_t + \pi \mu_{t-1} + e_t \) where \( \pi \) = Error correction co-efficient. The table 7 stated that the current ac-

Table 7: Normalized Co-efficient

<table>
<thead>
<tr>
<th>Variable</th>
<th>Co-efficient</th>
<th>t-statistic</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>VRER</td>
<td>7993470</td>
<td>2.23</td>
<td>0.037</td>
</tr>
<tr>
<td>LCPI</td>
<td>-18369</td>
<td>-3</td>
<td>0.006</td>
</tr>
<tr>
<td>LGDPF</td>
<td>28466</td>
<td>2.24</td>
<td>0.035</td>
</tr>
<tr>
<td>LOIL</td>
<td>2803</td>
<td>1.37</td>
<td>0.18</td>
</tr>
<tr>
<td>LM2</td>
<td>5018</td>
<td>0.59</td>
<td>0.56</td>
</tr>
<tr>
<td>C</td>
<td>-377068</td>
<td>-5.06</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Source: E views 7

count deficit is positively related to variation of real exchange rate in long run. The value of Beta coefficient indicated that current account deficit tend to increase by increasing the variation of real exchange rate at average proportion of about 7993470, which shows in long run that if there is 1% increase in variation of real exchange rate will tend to 7993470% increase in current account deficit.
and t-statistics of co-efficient of variation of real exchange rate is 2.23, which indicate that variation of real exchange rate has significant effect on current account deficit in long run. The value of Beta coefficient of consumer price index is about -18369, which that if there is 1% increase in consumer price index tends to decrease 18369% in current account deficit and t-statistics of co-efficient of consumer price index is -3, which results that consumer price index has significant effect on current account deficit in long run. The value of Beta coefficient of GDPF is 28466, which shows that in long run if there is 1% increase in GDPF results 28466% increase in current account deficit and t-statistics of co-efficient of GDPF is 2.24, which indicate that budget deficit has significant effect on current account deficit in long run. But, the results of oil revenue and M2 also don't show significant effect with beta coefficient 2803 and 5018 on current account deficit. The table 8 presents estimated coefficient of error correction term. The

<table>
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<tr>
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<td>1.37</td>
<td>0.18</td>
</tr>
<tr>
<td>LM2</td>
<td>5018</td>
<td>0.59</td>
<td>0.56</td>
</tr>
<tr>
<td>ECM</td>
<td>-0.51</td>
<td>-3.04</td>
<td>0.006</td>
</tr>
</tbody>
</table>

R-Squared= 0.45 F-stat. F(5,24) 3.82 [0.011]

Source: E views 7

estimated value of the coefficient of the error correction term shows that the system corrects its previous period's level of equilibrium within a year. For instance, the error term -0.51 implies that 51% convergence occurs towards short run to long run in Iran within a year through changes in variation of real exchange rate, GDPF, consumer price index, oil revenue and M2.

5 CONCLUSION

Several global economies have been affected significantly by the recent financial crisis depending on degree of their connection to the worldwide economy movements. Countries that their financial markets are linked with each other have been affected directly (through financial markets) and the other countries have been affected indirectly (through trade) by the crisis. Through regressive effective demand channel, trade flow of both developed and developing countries have been affected by crisis during 1978-2011. The universal economic crisis caused mutability and fell growth in both developing and developed countries, so that the world economy entered a recession stage and decreased domestic and foreign demands, which points interruption of production, break of economy and the unemployment of labor force and eventually decline in trade.
The most important of this research study was to observe the long run as well as short run relationship between variation of real exchange rate and Current account deficit. The results of Johansen Co-integration regression shows that variation of real exchange rate, GDPF have positive impact on current account deficit. The results suggest a positive and statistically significant relation between exchange rate volatility and current account balance. In all, the results suggest that countries with higher exchange rate volatility have more balanced current accounts, which reflects the impact of exchange rate volatility on saving and investment.

On the other hand, consumer price index negatively affect the current account deficit. The net result for a country with a rise in inflation is decreased exports and increased consumption of imports. The result is a fall in current account. As current account decreases, current account deficits eventually lead to a depreciation in the home currency. In addition, the results of this regression shows that oil revenue and M2 have positive impact on current account deficit, but not significant. From 1978-2011, higher oil prices have led to a significant redistribution of global income from oil importers to oil exporters. In particular, oil-exporting countries have seen their purchasing power increase and the way they have allocated their revenue windfalls has become a key issue. Indeed, revenue windfalls allocation has, by definition, important implications for their current balances and then for the global pattern of current account imbalances. If the money supply increases, the amount of liquidity increases, thus increasing the demand for other assets is leading to higher prices and reduced interest rates. The results of error correction model also indicate the existence of short run relationship among the variables.

To summarize, this means that crisis has much intense effects in developing countries. That is due to further faint in the financial set and unfavorable cautious legislation and financial markets in these countries. Therefore, the effect of crisis on developing countries can be decreased by resonance the financial system and prudential regulation of the financial market.

5.1 Policy Recommendations

By keeping in view the above cited results and arguments, the research study proposed the following policy recommendations 1. For reducing current account deficit, Government adopt those policies which reduce variation of real exchange rate such as stabled in exchange rate market and others market. 2. Consumer price index also very important for reducing the current account deficit for the economy of Iran. 3. changing in the composition of the balance sheet of the Central Bank can play a major role in stimulating aggregate demand in the economy and the economy out of the recession. 4. The efforts of the government and the monetary authorities in order to contribute to stability and liquidity in the financial system is essential to reduce the vulnerability of crisis. 5. Financial assistance in the form of support packages in three main areas, including support for small and medium enterprises, supporting families and consumers, and support channels and services can reduce the negative ef-
fects of the financial crisis on production, consumption and distribution.

REFERENCES


