ISSN: 0975-833X

Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 8, Issue, 03, pp.28729-28732, March, 2016

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

RESEARCH ARTICLE

RISK PREMIUM THROUGH REAL INTEREST RATE AND DEPOSIT INTEREST RATE: A STUDY FROM GULF STATES

***Hafiz Waqas Kamran, Areeba Tawab, Laiba Saeed, Maida Riaz and Warda Babar**

University of Central Punjab, Faisalabad, Pakistan

ARTICLE INFO

Article History:
Received 15th December, 2015
Received in revised form
28th January, 2016
Accepted 20th February, 2016
Published online 31st March, 2016

Key words:

Risk premium, Conceptual model,
Random effect model, Fixed effect model.

ABSTRACT

This paper refers the discussion of risk premium with the predictors in evidence of gulf states. In this we analysis the sample 05 gulf states; Kuwait, Bahrain, Iraq, Oman and Qatar have been considered from the year 2001 to 2010. A conceptual model has been developed for the understanding the whole study and key findings have been explained for the future decisions. We use the different model to analysis that deposit interest rate has no significant effect on outcome and real interest rate have a significant effect on the outcome due to it is country specific factors and this result is derived by random effect model. Entities individual effect has been controlled through Fixed effect model.

Citation: Hafiz Waqas Kamran, Areeba Tawab, Laiba Saeed, Maida Riaz and Warda Babar, 2016. "Risk premium through real interest rate and deposit interest rate: A study from gulf states", *International Journal of Current Research,* 8, (03), 28729-28732.

INTRODUCTION

This paper refers the discussion of risk premium with the predictors in evidence of gulf states. In this we analysis the sample of 5 countries in which include Kuwait, Bahrain, Iraq, Oman and Qatar. And we conduct the 10 year data from 2001 to 2010. Arisk premium is the minimum amount of money by which the expected return on a risky asset must exceed the known return on a risk-free asset in order to induce an individual to hold the risky asset rather than the risk-free asset. And to estimate the effect of cost of capital in current stock market there is use the residual income model. And it related to company specific factor because its industry risk premium is high. The real interest rate is the rate of interest an investor expects to receive after accounting for the effect of inflation. The real interest rate of an investment is calculated as the amount by which the nominal interest rate is greater than the inflation rate. Deposit interest rate is the interest rate paid by financial institutions like Bank to deposit account holders. Deposit accounts include certificates of deposit, savings accounts and self-directed deposit retirement accounts. Interest rate is very important inputs for many economic decision making process. Forecasting interest rate is not too easy, but they are determined through the forces of demand and supply (as would be expected in the competitive market). Inflationary expectations are very risky because it depends on the lenders demand for compensation for predicted losses in purchasing power. The real rate of interest is the nominal (reported) interest rate reduced by the loss of purchasing power due to inflation. Results or estimations are good if the inflation rate is not too high. Supply, demand and government actions are the proxy real rate while the nominal rate is equal to the real rate plus the expected rate of inflation.

The basic proxies of the real rate are the ability or tendency of households to borrow and save. Nominal interest rate differ from real interest rate in many aspects such as due to inflation, if we explain it in a simple manner there are many rates which varies on the base of maturity and default risk. This will generally depends on the risk premium its opportunity where the risk premium is the surplus of the expected return over the risk free rate. This risk free rate is the return and risk free assets such as T-Bills. The Gulf state are The Arab states of the Persian Gulf There are seven Arab states which border the Persian Gulf, namely Kuwait, Bahrain, Iraq, Oman, Qatar, Saudi Arabia and the United Arab Emirates (UAE). The finance markets in GCC are expected to play a growing role in financing the process of economic growth of GCC. The level of the interest rate highly effects the economic decisions of the final consumer. Monetary policy actions are

****Corresponding author: Hafiz Waqas Kamran,***
University of Central Punjab, Faisalabad, Pakistan.

needed to minimize the inflationary pressures in the GCC economy. Price stability is important to sustain the economic growth. It can only be achieved when growth does not lead to inflationary pressures in the economy and the Monetary policies effects the risk premium in order to economic growth in these states.

Research Questions

- How the Monetary Policy effect the risk premium in Gulf countries?
- How does real interest rate and deposit interest rate influence the economic growth of Gulf countries?
- What are the factors influencing the risk premium in Gulf countries?
- How the interest rates have a positive effect on economic growth?

Objectives

Our objective is to help the Government, Central Banks and other public authorities that affect the quantity of money and bank credit in their decision making. This eventually results in consumers and businesses to borrow more money leading to more spending

Literature review

Finance theory tells us that risk premium in exchange market is based on the conditional variance errors market forecast (De Santis & Gerard, 1998; Domowitz & Hakkio, 1985). Deposit interest rate is simply based on various sources of uncertainty and behavior of customer and investor. The optimal margin of banks through deposit interest rate is decided by the cost, regulation, credit risk conditions. The bank's equity has negative effect when bank faces little interest rate risk(Wong, 1997). Macro economy also have an effect on effect exchange rate in gulf countries in this some limitations to identification to these factors and two shocks are involve in this fist is permanent shocks that have an long term effect on exchange rate and have a little effect on current account. And second is temporary shock have a huge effect on current account but have a short run effect on exchange rate, but it not apply on long run variables (Lee and Chinn, 2006).

There is different ways that implies on the exchange rates that is adjust their flexible price of actual real interest rate and real interest rate gap has a value of inflation indicator(Neiss & Nelson, 2003). Real interest rate also effect by the macroeconomics in which include the business and consumers investment decisions and demand that has a strong effect of business cycle (Mishkin, 1981). The stock market is small in gulf countries and listed companies are less. Commercial banks are prominent in the Gulf States. Government put restriction on listing companies in the shock market and made regulations for forward trade. In Kuwait government ban on the create of new listed companies such as souk Al-Manakh involved in unregulated market in Kuwait-owned Gulf-based did not follow the officially exchange listing environments. Government also took the steps to increase the performance better in Kuwait stock exchange market. In this include the implementation of daily price change system and written auction system(Hassan, Al-Sultan, & Al-Saleem, 2003). Interest rate and forward exchange rates are used to take out the future interest rate and inflations rate and these method are rely on to implications of forward interest rate so take out the estimate future time- path (Söderlind & Svensson, 1997).

There is a framework of risk premium that related to a resolution to CAPM's challenge to the strategy field and the investors face the firm-specific risk due to they are not diversified that's why they want lower risk premium from firms that are able to reduced firm specific risk and this prediction on the some theories as like information economics, risk management and strategy, as well as empirical challenges to CAPM(Chatterjee, Lubatkin, Lyon, & Schulze, 1999).

Research framework

It shows the graphical presentation of the article that real interest rate and deposit interest rate have an effect on risk premium.

Risk Premium Determinants

$$riskpremium = \beta 0 + \beta 1\ \mathrm{X1}(realinterestrate) + \beta 2\mathrm{X2}\ (depositinterestrate) + e$$

Research methodology

Our quantitative research methodology is panel data analysis.

Variables and hypothesis

Variables

Risk premium: Risk premium is the Depended variable that is exceed from risk free rate and it is measured by difference between expected rate of return on market and return on risk free rate.

$$Rp = Rm - Rf$$

Rm: expected return on market (market portfolio is identical for return on market)

Rf: risk free rate of return (where investment with zero risk)

Real interest rate: Real interest rate is the independent variable that is measuring the percentage of purchasing power of lender's received with interest. And it is measured by the two proxies firstly, difference between Nominal rate and inflation rate.

$$Real\ rate\ of\ interest = Nominal\ rate - Inflation\ rate$$

Nominal rate: percentage that pay against use of lender's money.

Inflation rate: calculating annual percentage inflation rate in CPI consumer price index (examine the weight average of price of consumer's good and services)

Deposit interest rate

Deposit interest rate also the independent variable and it is paid by the commercial banks for demand, time or saving deposits under some conditions. And this is measured by three ways as following:

$$A = p(1 + rt)$$

A= Annual amount
P= Deposit amount
r= Annual nominal rate of interest
t= no. of years
n= no. of compounding month

Hypothesis

H_{0a}: Risk premium is not determined by real interest rate.
H_{1a}: There is a significant impact of real interest rate on risk premium.
H_{0b}: Risk premium is not determined by deposit interest rate.
H_{2b} (a): there is a significant impact of risk premium through deposit interest rate.

Key Findings

Table 1. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Risk premium	50	2.372	2.9	-1.5	8.2
Real rate of interest	50	1.234	11.69	-18.3	43.7
Deposit interest rate	50	3.53	2.4	0	10.5

The mean of risk premium, real interest rate and deposit interest rate are 2.372, 1.234 and 3.53 respectively. There is difference of mean of real interest rate and deposit interest rate with risk premium is 1.138 and -1.158. Standard error of risk premium is 0.4114, real interest rate 1.6534 and deposit interest rate 0.3401. Standard deviation of risk premium, real interest rate and deposit interest rate are 2.9097, 11.691 and 2.405 respectively. The minimum and maximum values of the variables are -1.5/8.2, -18.3/43.7 and 0/10.5.

Table 2. Correlation Matrix

	Real interest rate	Deposit interest rate
Real interest rate	1	
Deposit interest rate	0.0435	1
	0.7645	

Before going for the further analysis it is going to obvious to check the level of correlation between the selected set of variables. The above table defines the correlation matrix between all the major variables which are selected for the present model of study. With the help of this we can see that there is no high degree of correlation between all the selected set of variables of the study. So, we have selected all the variables for the further analysis.

Table 3. VIF Value

Variable	vif	1/vif
Real interest rate	1	0.998112
Deposit interest rate	1	0.998112
Mean vif	1	

The value of variance inflation factor is not more than 5 in individual cases and in the overall mean value so we have concluded that the level of correlation problem is low/reasonable and we have included all the variables for the further panel data analysis.

Regression outcomes

Table 5. Least Square Dummy Variable Model (LSDVM)

Risk premium	coef.	Std. Err.	t	P>t
Real interest rate	0.0399084	0.024	1.63	0.11
Deposit interest rate	0.0796384	0.135	0.59	0.56
_cons	2.595843	0.8	3.24	0.002

*, **, *** explains is that value is significant at 10, 05 and 01% respectively.

Table 6. Fixed Effect Model (FEM)

Risk premium	coef.	Std. Err.	t	P>t
Real interest rate	0.0399084	0.024	1.63	0.11
Deposit interest rate	0.0796384	0.135	0.59	0.56
_cons	2.04163	0.55	3.68	0.001

*, **, *** explains is that value is significant at 10, 05 and 01% respectively.

Table 7. Random Effect Model (REM)

Risk premium	coef.	Std. Err.	z	P>z
Real interest rate	0.0581242	0.035	1.65	0.099*
Deposit interest rate	0.0687923	0.171	0.4	0.688
_cons	2.057438	0.72	2.82	0.005

*, **, *** explains is that value is significant at 10, 05 and 01% respectively.

Table 8. Pooled Regression Model (PRM)

Risk premium	coef.	Std. Err.	t	P>t
Real interest rate	0.0581242	0.035	1.65	0.106
Deposit interest rate	0.0687923	0.171	0.4	0.69
_cons	2.057438	0.72	2.82	0.007

*, **, *** explains is that value is significant at 10, 05 and 01% respectively.

Hausman effect

b = consistent under Ho and Ha;
B = inconsistent under Ha, efficient under Ho; obtained from xtreg
Test: Ho: difference in coefficients not systematic = 0.52
= -0.52 chi2<0 ==> model fitted on these Data fails to meet the asymptotic, Assumptions of the Hausman test;

See suest for a generalized test

Lagrange multiplier

Test: Var(u) = 0

chibar2(01) = 0.00
Prob > chibar2 = 1.0000

Table above describe the various outcomes of panel data analysis for dependent variable that is Risk premium of Gulf countries. The result in the above table demonstrate the outcomes for Least Square Dummy Variable Model (LSDVM), Fixed Effect Model (FEM), Random Effect Model (REM), Pooled Regression Model (PRM), Hausman Test and Langrangian Multiplier. The outcomes revealed the fact that among all the models in which LSDVM and FEM results are same. If there is one-unit change in real interest rate, then outcome is changed positively by 0.0399 but this change is insignificant. Similarly, if there is one-unit change in deposit interest rate then outcome is changed positively by 0.079 which is insignificant. Such findings are explaining the fact that this explanatory variable has not significant impact on outcome.

The results of REM and PRM approximately are same so if there is one-unit change in real interest rate then outcome is change positively by 0.05, significant at 10 %. But in PRM it is in significant because it is not lie within 10%, 5% and 1%. Meanwhile, if there is one-unit change in deposit interest rate then outcome is changed positively by 0.068 and it is insignificant because it is not lie within 10%, 5% and 1%. After analyzing the above model, Hausman test conclude that either Random effect or Fixed Effect is acceptable. P-value of Hausman test is insignificant so we have to accept that "difference in coefficients is not systematic". Further analysis has been conducted through Lagrange Multiplier which finally reveals the fact that p-value is significant at 01 %, so we have to accept that "variance across the entities is not zero" which means that random effect outcomes are acceptable for the final decision.

Conclusion

From the above discussion it is quite clear that discussing the risk premium that have an effect of real interest rate and deposit interest rate is not the independent decisions. They have an effect of country specific factors because it is the key factors which have significant contribution in getting the decision about risk premium. Therefore, the real interest rate has more significant effect on risk premium rather than deposit interest rate. For the results of our study we use least square dummy variable model, fixed effect model, random effect model, pooled regression model because our variance inflation factor is about 1.00 that is lies within 0.05 and it is low that's why we use panel data analysis In which include least square dummy variable model and fixed effect model have the same result and we deal with them at a single head which is fixed effect model. It controls the effect of dummy variables that may affect our predictor and outcomes. We also conduct Hausman analysis in which we choose the random effect model which is set on our study of model. Our Lagrange multiplier is fall within 0.05 that is why we accept the Random effect model rather than pooled regression model. And we also conclude that real rate of interest have a significant impact on Risk premium in random effect model and we accept the alternative hypothesis H1. And in case of deposit interest rate we accept the null hypothesis because deposit interest rates have no significant impact on risk premium that is H0. So, the financial decision makers must have considered real interest rate variable to identify the market risk premium because it plays an important role in economy sector. And investors are interested to invest their investment in that country in which the exchange rate are attractable and have less chances to loss because risk premium is the factor which is consider by the investor when they invest and they also focus on the real interest rate and deposit interest rate.

REFERENCES

Chatterjee, S., Lubatkin, M. H., Lyon, E., & Schulze, W. S. 1999. Toward a strategic theory of risk premium: Moving beyond CAPM. *Academy of Management Review, 24*(3), 556-567.

De Santis, G., & Gerard, B. 1998. How big is the premium for currency risk? *Journal of Financial Economics, 49*(3), 375-412.

Domowitz, I., & Hakkio, C. S. 1985. Conditional variance and the risk premium in the foreign exchange market. *Journal of international Economics, 19*(1), 47-66.

Hassan, K. M., Al-Sultan, W. S., & Al-Saleem, J. A. 2003. Stock market efficiency in the gulf cooperation council countries (GCC): The case of Kuwait stock exchange. *Development, 1*(1).

Lee, J., & Chinn, M. D. 2006. Current account and real exchange rate dynamics in the G7 countries. *Journal of International Money and Finance, 25*(2), 257-274.

Mishkin, F. S. 1981. *The real interest rate: An empirical investigation.* Paper presented at the Carnegie-Rochester Conference Series on Public Policy.

Neiss, K. S., & Nelson, E. 2003. The real-interest-rate gap as an inflation indicator. *Macroeconomic dynamics, 7*(02), 239-262.

Söderlind, P., & Svensson, L. 1997. New techniques to extract market expectations from financial instruments. *Journal of Monetary Economics,* 40(2), 383-429.

Wong, K. P. 1997. On the determinants of bank interest margins under credit and interest rate risks. *Journal of Banking & Finance, 21*(2), 251-271.

****