

*Full Length Research Paper*

# A comparison of the effect of foreign portfolio equity on stock returns of listed banking and non-banking institutions in Kenya

Loice Koskei<sup>1\*</sup>, Lawrence Kibet<sup>2</sup> and Andrew Nyang'au<sup>3</sup>

<sup>1</sup>Kabarak University, Kenya.

<sup>2</sup>Egerton University, Kenya.

<sup>3</sup>Mount Kenya University, Kenya.

Received 3 August, 2016; Accepted 14 November, 2016

Uncertainties in the flow of foreign portfolio investments (FPI) result in unpredictable behaviour of stock returns in Kenya's economy and also at the firm level. The net effect of this is the possibility of financial loss suffered by the banking and non-banking institutions. The objective of the study was to compare the effects of foreign portfolio equity on stock returns of listed banking and non-banking institutions in Kenya. The study used purposive sampling technique and concentrated on 14 banking and non-banking institutions listed on the Nairobi Securities Exchange. Secondary data was obtained from Central bank of Kenya, Nairobi securities exchange and capital markets authority for the period January 2008 to December 2014. The study used causal research design, and adopted a panel data regression using the Ordinary Least Squares (OLS) method where the data included time series and cross-sectional data that was pooled into a panel data set and estimated using panel data regression. Results from panel estimation showed that exchange rate risk had a significant negative coefficient of -0.8371 with a P-value of 0.0020 for banking institution and negative coefficient of -0.6023 with a significant P-Value of 0.0673 for non-banking institutions. The results are statistically significant at one percent level of significance and five percent level of significance for banking and non-banking institutions respectively. Inflation had significant negative coefficient of -1.7550 with a P-value of 0.0210 in relation to stock returns for banking institutions and an insignificant negative coefficient of -0.6875 with a P-value of 0.4569 for non-banking institutions. The results indicate that the stock returns of banking institutions are affected by inflation while inflation has no effect on non-banking stock returns. The study recommended that policies that would attract foreign portfolio investment should be pursued in order to enhance stock returns.

**Key words:** Foreign portfolio equity, banking institutions, non-banking institutions, stock returns, Nairobi securities exchange.

## INTRODUCTION

An important development in international financial markets over the last decade has been the growing role of foreign portfolio investment as a channel for international capital flows to developing countries. The increased flow of securities investment from industrialized countries to emerging markets was made possible by a

number of developments in all the countries involved (Somoncu and Karan, 2006). Major sources for foreign portfolio investment in developing countries were the predominantly United States (US) based emerging markets mutual funds which contributed to the surge in investments in emerging markets equities. Some of these

funds were interested in investing in countries where macroeconomic variables were far out of line with sustainable values, so that when changes in asset prices occurred, they would be attractively large. However, the financial crises driven from the reverse in capital inflows lead to the discussion on the role of market players. Bouts of turbulences in international financial markets in recent years have drawn attention to the role played by institutional investors, especially hedge funds. Following the crisis in Asia, Russia and Turkey, it was suggested that hedge fund investments precipitated major developments in asset prices either directly through their own transactions or indirectly *via* the tendency of other market participants to follow their lead (Conover et al., 2002).

### **Importance of foreign portfolio investments in financial institutions**

Foreign portfolio investment increases the liquidity of financial institutions and domestic capital markets, and can help develop market efficiency as well. As markets become more liquid, as they become deeper and broader, a wider range of investments can be financed. New enterprises, for example, have a greater chance of receiving start-up financing. Savers have more opportunity to invest with the assurance that they will be able to manage their portfolio, or sell their financial securities quickly if they need access to their savings. In this way, liquid markets can also make longer-term investment more attractive. Foreign portfolio investment can also bring discipline and know-how into the financial institutions. In a deeper, broader market, investors will have greater incentives to expend resources in researching new or emerging investment opportunities. As enterprises compete for financing, they will face demands for better information, both in terms of quantity and quality. This press for fuller disclosure will promote transparency, which can have positive spill-over into other economic sectors (APEC, 2000).

### **Contribution of the study**

The understanding of foreign portfolio flows is important for policy makers, forecasters and researchers alike, and this is particularly the case for financial institutions in Kenya. Foreign portfolio flows make up an important part of the balance of payments, and the large fluctuations in such flows have, among emerging economies, ignited a number of balance-of-payment crises over the past two

decades. The sharp reduction in foreign investment inflows was, indeed, the main reason for the Mexican crisis of 1994 and 1995, and it played an important part in most of the emerging market crises that was to follow. Foreign portfolio flows not only constitute one of the main ingredients in the balance of payments, but also one of the most volatile. Understanding foreign portfolio investment flows is, therefore, crucial in any balance-of-payments analysis. The discussion of the results could inform the improvement of structural policies with the objective of reducing the likelihood and intensity of adverse effects of foreign portfolio investments and increasing their benefits for the Kenyan economy.

There has been a very large information gap for investors and analysts on the effect of foreign portfolio flows on stock returns. The study may help to reduce the information gap by adding to the existing body of knowledge. Investors also need information on the behaviour of foreign portfolio flows, especially in their short-term and long-term financing decisions, earning assessments, and also for capital budgeting decisions.

## **METHODOLOGY**

### **Introduction**

This chapter presented the model, methods, data and estimation techniques used in the study to investigate the effect of foreign portfolio investment on stock returns.

### **Research design**

The design of the study was causal as it seeks to test for the existence of cause-and-effect relationships among variables (Cooper and Schindler, 2004). This design is suitable in studies which aim to determine whether a group of variables together influence a given dependant variable (Saunders et al., 2009). The design was suitable for this study as it adopted a theoretical approach in establishing the comparison between the effects of foreign portfolio equity on stock returns of listed banking and non-banking institutions in Kenya.

### **Target population**

The study focused on a population of 21 listed commercial banks in Kenya. The 21 listed financial institutions trade the securities in NSE.

### **Sample and sampling procedure**

The sample size for this study was 14 listed banking and non-banking institutions. Purposive sampling was used to select 14

\*Corresponding author. E-mail: hhejase@mu.edu.lb.

listed financial institutions whose monthly foreign data was available at NSE since January 2008 to December 2014.

### Data collection

The study used panel financial data over the seven year period (January 2008 to December 2014) to compare the effect of foreign portfolio equity (sales, purchases and turnover) on stock returns of listed banking and non-banking institutions in Kenya. To ensure that enough degrees of freedom in the models to be estimated are available, monthly data covering the entire study period was collected resulting to 9408 observations. The method of data collection was secondary research, which essentially involved reviewing data sources that were collected for some other purpose than the study at hand. The main sources of data were: Central Bank of Kenya, Capital markets Authority, Nairobi Securities Exchanges and Kenya Bureaus of Statistics offices.

### Data analysis

This study adopted a panel data regression using the Ordinary Least Squares (OLS) method where the data included time series and cross-sectional data that was pooled into a panel data set and estimated using panel data regression.

### Justification for use of panel data approach

Panel data is also called pooled or combined data since there are elements of both time series and cross section data. According to Damodar and Sangeetha (2007), panel data has a number of advantages. First, since panel data relate to individuals e.g. firms over time, there is bound to be heterogeneity in these units. The technique of panel data estimation takes such heterogeneity explicitly into account by allowing for individual specific variables. Secondly, by combining time series of cross section observations, panel data give more informative data, more variability, less collinearity among variables, more degrees of freedom and more efficiency. Thirdly, by making data available for several units, panel data can minimise the bias that might result if the study aggregate individuals into broad aggregates. These advantages enrich panel data empirical analysis in ways that may not be possible if only cross-section or time series data is used, hence the use of panel data in this study.

### Descriptive statistics

Descriptive statistics was essential in determining the statistical properties of the model so as to select the proper functional form of the estimable model. Therefore the study sought to determine the spread of the data which included calculating for the mean, standard deviation, standard errors, maximum and minimum values of the variables overtime. This also involved finding correlation matrix so as to check which variables were highly correlated so as to avoid the problem of multi-collinearity which is a common problem in time series data.

### Model specification, estimation and rationale of variables

A univariate analysis was conducted and the data converted to their natural logs to ensure a normal distribution and eliminate heteroscedasticity. The study hypotheses were measured using one panel data regression equation. The equation had Stock returns (SR) as the dependent variable and Foreign portfolio equity

sales (FPES), Foreign portfolio equity purchases (FPEP) and Foreign portfolio equity turnover (FPET) as independent variables. Exchange rate risk (ERR), Treasury bill rate (TBIL), Inflation rate (INFL) and Market capitalization (MCAP) were the control/intervening variables in the study. The regression analysis used E-views 7 data analysis software.

The hypotheses were tested using the following regression model for banking institutions;

$$SR_{it} = \alpha + \beta_1 FPES_{it} + \beta_2 FPEP_{it} + \beta_3 FPET_{it} + \beta_4 ERR_{it} + \beta_5 TBIL_{it} + \beta_6 INFL_{it} + \beta_7 MCAP_{it} + \mu_{it}$$

Where;  $SR_{it}$  = Stock returns at time  $t$  for banking institutions  $i$ ;  $FPES_{it}$  = Foreign portfolio equity sales at time  $t$ ;  $FPEP_{it}$  = Foreign portfolio equity purchases at time  $t$ ;  $FPET_{it}$  = Foreign portfolio equity turnover at time  $t$ ;  $ERR_{it}$  = Exchange rate risk at time  $t$ ;  $TBIL_{it}$  = Treasury bill rate at time  $t$ ;  $INFL_{it}$  = Inflation rate at time  $t$ ;  $MCAP_{it}$  = Market capitalization at time  $t$ ;  $\alpha$  = The intercept;  $\beta_i$  = The parameter of explanatory variables of FPES, FPEP, FPET, ERR, TBIL, INFL and MCAP;  $\mu_i$  = The disturbance term.

For non-banking institutions, the hypotheses were tested using the following regression model:

$$SR_{it} = \alpha + \beta_1 FPES_{it} + \beta_2 FPEP_{it} + \beta_3 FPET_{it} + \beta_4 ERR_{it} + \beta_5 TBIL_{it} + \beta_6 INFL_{it} + \beta_7 MCAP_{it} + \mu_{it}$$

### Unit root tests

A unit root test was carried in this study to examine stationarity of variables because it used panel data which combined both cross-sectional and time series information. A variable is said to be stationary if it displays mean-reverting behaviour implying that its mean remains constant over time (Hlouska and Wagner, 2005). Any regression with non-stationary variables is invalid and hence, any time series application must start with testing stationarity of the data (Charito, 2010). This study used Levin, Lin and Chu unit root test to examine stationarity. Levin, Lin and Chu suggested the following hypothesis:

$H_0$  = each time series contains a unit root

$H_1$  = each time series is stationary

### Choice of model: Testing for the validity of the fixed effects model

Panel data analysis has three more-or-less independent approaches: Pooled panels; assumes that there are no unique attributes of individuals within the measurement set, and no universal effects across time. Fixed effects models; assumes that there are unique attributes of individuals that are not the results of random variation and that do not vary across time. It assumes differences in intercepts across groups or time periods. Random effects models; assumes there are unique, time constant attributes of individuals that are the results of random variation and do not correlate with the individual regressors. This model is adequate if the study want to draw inferences about the whole population, not only the examined sample.

The choice of the appropriate model depends upon the objective of the analysis, and the problems concerning the exogeneity of the explanatory variables. The last two models were considered in this analysis since pooled regression model assumes that all the financial institutions are the same which is not the case. The Pooled regression model assumes that the coefficients (including the intercepts) are the same for all the financial institutions. The fixed and random effects models cater for heterogeneity or individuality

**Table 1.** Hausman test (Banking institutions).

Test summary	Chi-Sq. statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.000000	7	1.0000

**Table 2.** Hausman test (Non-banking institutions).

Test summary	Chi-Sq. statistic	Chi-Sq. d.f.	Prob.
Cross-section random	1.484702	4	0.8293

among the financial institutions by allowing each financial institution to have its own intercept value which is time invariant. As to which model between the fixed and random is appropriate, the study used the Hausman test.

## RESULTS AND DISCUSSION

### Comparative analysis results between banking and non-banking institutions

The study used panel estimation model to find out if there is any comparison between the effect of foreign portfolio equity (sale, purchases and turnover) and exchange rate risk on stock returns of banking and non-banking institutions. Independent panel analysis tests were carried out differently for banking and non-banking institutions. The results are discussed subsequently.

### Panel estimation results (Banking and non-banking institutions)

Separate panel equations were run for banking and non-banking institutions to have an in depth analysis of the results. In the case of banking institutions the Hausman test had a chi square statistic of 0.000000 with an insignificant probability value of 1.0000 meaning that the study should reject the fixed effect model in favour of the random effects model as presented in Table 1. In non-banking institutions, Hausman test had an insignificant probability value of 0.8293 indicating also that the study should reject the fixed effect model in favour of the random effects model as presented in Table 2. Table 3 presents the panel estimation results for banking and non-banking institutions.

### A comparison of the effect of foreign portfolio equity and exchange rate risk on stock returns of banking and non-banking institutions

For banking institutions the random effects model indicated that foreign portfolio equity purchases had a coefficient of -0.0095 and an insignificant probability

value of 0.4495. For non-banking institutions, foreign portfolio equity purchases had a coefficient of 0.0014 with an insignificant probability value of 0.5820. This therefore meant that foreign portfolio equity purchases do not affect stock returns of banking institutions. The results are not consistent with base-broadening hypothesis which suggested that foreign inflows cause emerging equity market prices to rise. By broadening the investor base, diversification and risk sharing is increased thereby lowering the required risk premium.

Foreign portfolio equity sales had a coefficient -0.0022 and an insignificant probability value of 0.5534 for banking institutions and a coefficient of 0.0006 with an insignificant probability value of 0.9596 for non-banking institutions meaning that foreign portfolio equity sales do not have an effect on stock returns. This is not in line with the work of Odean (1998) and Griffin et al. (2003). Odean (1998) showed that individual investors tend to sell past winners and hold on to past losers. Griffin et al. (2003) on the dynamics of institutional and individual trading showed that individual investors tend to be contrarian traders in that they sell stocks with positive returns in prior trading days.

Foreign portfolio equity turnover had a coefficient of -1.327 and a probability value of 0.4043 for banking institutions and a coefficient of -0.5559 with a probability value of 0.7274 for non-banking institutions. The results are statistically insignificant indicating that foreign portfolio equity turnover do not affect stock returns. The results are not consistent with the work of Stulz (1999) who argued that foreign flows increase prices when they come in and decrease them when they leave thereby making prices more volatile. Hence, capital flows have an impact on valuations only if they are undertaken because of information that foreign investors have that is not yet incorporated in prices.

Exchange rate risk had a significant negative coefficient of -0.8371 with a P-value of 0.0020 for banking institution and negative coefficient of -0.6023 with a significant P-Value of 0.0673 for non-banking institutions. The results are statistically significant at one percent level of significance and five percent level of significance for banking and non-banking institutions respectively. The

**Table 3.** The panel estimation output for banking and non-banking institutions.

Variable	Banking institutions		Non-banking institutions	
	Pooled model	Random effects model	Pooled model	Random effects model
	Coefficient (P-value)	Coefficient (P-value)	Coefficient (P-value)	Coefficient (P-value)
ERR	-0.837116(0.0020)***	-0.837116(0.0020)***	-0.605813(0.0092)***	-0.602355(0.0673)**
FPEP	-0.009568(0.4479)	-0.009568(0.4495)	0.001317(0.6485)	0.001447(0.5820)
FPES	-0.002275(0.5520)	-0.002275(0.5534)	0.003080(0.8249)	0.000640(0.9596)
FPET	-1.327508(0.4027)	-1.327508(0.4043)	-0.184036(0.9171)	-0.555928(0.7274)
INFL	-1.755014(0.0206)**	-1.755014(0.0210)**	-0.686962(0.2915)	-0.687515(0.4569)
MKTCAP	0.005876(0.3983)	0.005876(0.4000)	0.013893(0.1269)	0.009702(0.2426)
TBIL	-0.207882(0.2535)	-0.207882(0.2552)	-0.035529(0.8240)	-0.023153(0.9169)
C	5.048217(0.0041)	5.048217(0.0043)	1.659376(0.2697)	1.664582(0.4351)
R- Squared	0.022374	0.022374	0.033818	0.018793
Prob (F- Statistic)	0.008562	0.008562	0.123284	0.508605
Durbin- Watson Statistic	2.427628	2.427628	1.964748	2.095134
Nxt	840	840	336	336

\*\*\*Significance at 1% level of significance; \*\* Significance at 5% level of significance; \* Significance at 10% level of significance.

banks' exposure to exchange rate risk has grown in importance due to the continuing expansion of foreign currency business, greater variability of exchange rates, and increase in foreign exchange deposits and foreign borrowing in Kenyan banking sector. Exchange rates affect most directly those banking institutions with foreign currency transactions and foreign operations. Even without such activities, exchange rates can affect banking institutions indirectly through their influence on the extent of foreign competition, the demand for loans, and other aspects of banking conditions. The results are in line with the work of Maysami and Koh (2000) who examined the impacts of the exchange rate on the stock returns and showed that the exchange rate is the determinant in the stock prices.

Inflation had significant negative coefficient of -1.7550 with a P- value of 0.0210 in relation to stock returns for banking institutions and an insignificant negative coefficient of -0.6875 with a P- value of 0.4569 for non-banking institutions. The results indicate that the stock returns of banking institutions are affected by inflation while inflation has no effect on non- banking stock returns. The results supported prior expectation that an increase in inflation erodes the value of shares resulting to decrease in stock returns of banking institutions.

Treasury bills rate had insignificant negative coefficient of -0.2078 with a P-value of 0.2552 in relation to stock returns for banking institutions while non- banking institutions treasury bills rate had insignificant negative coefficient of -0.0231 with a P-value of 0.9169 indicating that treasury bills rate do not affect the stock returns of banking institutions and non-banking institutions. The findings support the work done by Joseph and Vezos (2006) who investigated the impact of interest rates changes on US bank's stock returns. Joseph and Vezos

study employed an Exponential Generalised Autoregressive Conditional Heteroscedastic model to account for the Autoregressive Conditional Heteroscedastic (ARCH) effects in daily returns instead of standard ordinary Least Square estimation methods with the result that the presence of ARCH effects would had affected estimation efficiency. The results suggested that the market return accounted for most of the variation in stock returns at both the individual bank and portfolio levels; and the degree of the sensitivity of the stock returns to interest rate changes was not very pronounced despite the use of high frequency data.

Market capitalization had insignificant positive coefficient of 0.00587 with a P- value of 0.4000 for banking institutions while non-banking institutions had insignificant positive coefficient of 0.0097 with a P-value of 0.2426 in relation to stock returns indicating that market capitalization do not affect the stock returns of banking and non-banking institutions. This is not in line with prior expectations which believed that large firms as measured by higher market capitalization are expected to have higher returns.

The probability F-statistic is 0.008 for banking institution meaning that the model is stable and significant at one percent level of significance. The probability F- statistic for non-banking institutions is 0.5086.

There is a difference in the results for banking and non-banking institutions. This could have been contributed by the fact that there were only four sampled non- banking institutions with very few observations. Another reason for differences in results could be because these non-banking institutions are small in size hence attracting a few foreign investors as indicated by the volume of inflows of foreign equity. The other reasons for varied results between banking and non- banking institutions

are first, non-banking institutions provide such services as hire purchase, leasing, asset management, venture capital services, insurance etc. which sometimes are not appealing to foreign investors as compared to services provided by banking institutions like foreign exchange financing.

Second, banking institutions have gone international by expanding their branch networks globally especially through cross listing as compared to non-banking institutions which may not be cross listed in other stock exchanges. Cross listing allows shares of these banks to be traded in other securities exchange hence the ability to attract foreign investors.

Third, most banking institutions have embraced financial globalization as compared to non-banking institutions. Financial globalization is encompassed by two main aspects: Free flow of capital into and out of the domestic economy and high participation in domestic financial system. Financial globalization can be measured by capital mobility, that is, holdings of cross-border financial assets and liabilities, magnitude of cross-border flows into and out of the financial system and foreign participation, that is, foreign share of domestic banking assets and liabilities, ease of entry for foreign financial institutions into domestic market.

Fourth, banking institutions can also raise funds at no cost as no interest is payable on demand deposits and therefore they have the potential to grow and improve their financial performance hence a possibility of attracting foreign investors as compared to non-banking institutions who have to pay higher and higher interest to attract more funds.

The null hypothesis stating that there is no significant comparative difference between the effect of foreign portfolio equity (sales, purchases and turnover) and exchange rate risk on stock returns of listed banking and non-banking institutions in Kenya is rejected.

### **A comparison of the effect of foreign portfolio equity on stock returns of banking and non-banking institutions**

The comparative results for banking and non-banking sector when tested independently showed varying findings. The panel estimation output results for banking and non-banking institutions indicated the following: Foreign portfolio equity sales for banking institutions had a coefficient -0.0022 and an insignificant probability value of 0.5534 while non-banking institutions had a coefficient of 0.00064 with an insignificant P-value of 0.9596 meaning that foreign portfolio equity sales do not affect stock returns of banking and non-banking institutions. Foreign portfolio equity purchases had a coefficient of -0.0095 and an insignificant probability value of 0.4495 for banking institutions while non-banking institutions had a coefficient of 0.00144 with an insignificant P-value of

0.5820. Foreign portfolio equity turnover had a coefficient of -1.3275 and a probability value of 0.4043 and a coefficient of -0.5559 with a P-value of 0.7274 for banking and non-banking institutions respectively. Exchange rate risk had a negative coefficient of -0.8371 with a statistically significant P-value of 0.0020 for banking institutions and negative coefficient of -0.6023 with a P-value of 0.0673 indicating that exchange rate do have significant effect on stock returns of banking institutions and non-banking institutions at one percent and five percent level of significance respectively. The null hypothesis stating that there is no significant comparative difference between the effect of foreign portfolio equity (sales, purchases and turnover) and exchange rate risk on stock returns of listed banking and non-banking institutions in Kenya fail to be accepted.

### **CONCLUSION**

The study found that there is a comparison between the effect of foreign portfolio equity (sales, purchases and turnover) and exchange rate risk on stock returns of banking and non-banking institutions. The study found out that foreign portfolio equity sales, foreign portfolio equity purchases and foreign portfolio equity turnover do not affect stock returns of banking institutions and non-banking institutions. Exchange rate risk affects stock returns of banking and non-banking institutions at one and five percent level of significance respectively. The study concluded that banking institutions engaged more in forex transaction and most of this banks are multinational banks hence the ease to attract foreign investors to buy the shares of their companies. Non-banking institutions on the other hand are limited by their nature, that is, they are small in size hence attracting a few foreign investors as indicated by the volume of inflows of foreign equity.

### **RECOMMENDATION**

The government of Kenya should enhance stability of macroeconomic factors such as foreign exchange rate through monetary policy as they affect the performance of securities hence stock returns. On the other hand, the government should aim at financing and promoting the growth of non-banking institutions in order to make them attractive to foreign investors in Kenya. The study recommended management of foreign equity flows in Kenya's banking sector through some non-radical interventions such as building of reserves by commercial banks to guard against reversals.

### **ACKNOWLEDGEMENTS**

All Glory, honour and praise be unto the Lord God Almighty for His mercy and grace without which this

article would have been impossible.

### Conflict of Interests

The authors have not declared any conflict of interests.

### REFERENCES

- Asia-Pacific Economic Cooperation (2000). Voluntary Action Plan for Promoting Freer and More Stable Capital Flows, report presented to APEC finance ministers.
- Charito BJ (2010). The evolution of corporate governance in an emerging market: Evidence from Philippine initial public offerings (IPO) Discussion Papers, No. 1002.
- Conover CM, Jensen GR, Robert RJ (2002). Emerging Markets: When Are They Worth It? *Fin. Anal. J.* 58(2):86-95.
- Cooper RD, Schindler PS (2004). *Business Research Methods*. Eight Edition. Tata McGraw-Hill. New Delhi, India.
- Damodar N, Sangeetha (2007). *Basic Econometrics*. Fourth Edition, Tata McGraw-Hill Publishing Company Limited in New Delhi in India.
- Griffin JM, Harris JH, Topaloglu S (2003). The dynamics of institutional and individual trading. *J. Financ.* 58: 2285-2320.
- Hlouska J, Wagner M (2005). The performance of panel unit root and stationarity tests: results from large scale simulation study. European Economic Institute. Working paper, No 5.
- Joseph NL, Vezos P (2006). The sensitivity of US banks' stock returns to interest and exchange rate changes. *Manage. Financ.* 32(2):182-199.
- Maysami RC, Koh TS (2000). A Vector Error Correction Model of the Singapore stock market. *Int. Rev. Econ. Financ.* 9:79-96.
- Odean T (1998). Are investors reluctant to realize their losses? *J. Financ.* 53:1775-1798.
- Somoncu K, Karan MB (2006). The impacts of international portfolio investments. *Int. J. Financ.* 77:149-167.
- Stulz RM (1999). *International Portfolio Flows and Security Markets*. Unpublished Working Paper, Ohio State University, Columbus, Ohio.
- Saunders M, Lewis P, Thornhill A (2009). *Research Methods for Business Students*. 5<sup>th</sup> Edition. Prentice Hall.