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GLOBALIZATION AND EQUITY RETURNS IN AFRICAN FRONTIER MARKETS

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DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the Research Proposal contains no material previously published or written by another person except where due reference is made in the Research Proposal itself.

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This Research Proposal has been submitted for examination with my approval as the Supervisor.

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List of Abbreviations

KOF- Konjunkturforschungsstelle

GFC- Global Financial Crisis

LSE- London Stock Exchange

INF- Inflation

M2- Money supply

FX- Foreign Exchange Rate

R- Term Structure of Interest Rates

FGI- Financial Globalization Index

ABSTRACT

Globalization has significant implications for risk sharing and diversification, cost of capital, market efficiency, financial decisions and macro-economic policy. This study investigates globalization which is measured in three different ways in 8 African frontier markets, from 1997 to 2013. The investigation is conducted using a Panel regression model and it explores whether integration affects equity returns. The factors used in this study are orthogonal to each other and the important fundamentals are inflation and money supply. The researcher finds evidence that the extent of African market globalization has a significant impact to their equity markets. The findings support partially integrated African market. The evidence is generally sensitive to the period of investigation suggesting changing integration through time.

1 INTRODUCTION

1.1 Background of the Study

Increasing globalization over the recent years has given rise to growing integration of international financial markets. Equity flows to developing countries have increased sharply in recent years because of globalization Bhaduri (2000). At the end of 1996 developed equity markets in Europe, Asia, and the United States accounted for over 90 percent of the global investment market, growing from $8.8 trillion in 1990 to $20 trillion in 1996 Linda, Rene, & Friedman (2000). Due to this growth, there has been greater emphasis on the development of equity markets as a part of financial reforms in many countries in the world. A developed stock market is considered crucial to national economic growth. These markets provide an additional channel along with banks and other financial institutions, for encouraging and thus mobilizing domestic savings.

In his study Elfakhani (2008) finds globalization has increased the correlations among different countries financial markets. The increased correlation would make investing in foreign markets to have no added benefit in terms of risk and return. This would end up reducing impact of diversification opportunities in the market. A study done by Bekaert (2009) concludes that the correlation between markets has risen over time and that the degree of globalization is higher during periods of higher volatility. Increased correlation across markets is consistent with, though not definitive evidence of greater integration of financial markets. As markets become more tightly linked, global risk factors rather than country-specific factors become more important in determining asset prices.

The effects of globalization on equity returns, as reported in the literature, are mixed. Foreign stocks no longer provide much of the benefit of diversification because they are moving in harmony with U.S. stocks (Buttler & Joaquin, 2002). In their study Popper & Coy (2002) find that the benefits from diversification can still be reaped, but it is essential for investors to continuously rebalance the asset allocation of their portfolios.

This research expands an analysis of the often neglected African stock market alongside assessing the effect of globalization to equity returns in frontier markets in Africa. Despite the significant attention to frontier markets among the investment community, very little research includes them.

Frontier markets may offer promising diversification benefits reports Speidell & Krohne (2007) document low correlations between frontier and developed market equities. In their study Jayasuriya & Shambora (2009) find diversification benefits across market classifications and consider optimal portfolios of developed, emerging, and frontier markets. They find improved portfolio risk and returns when investors diversify their portfolio into six frontier markets. (Cheng, Jahan-Parvar, & Rothman (2009) use variations of the CAPM to study nine emerging and frontier equity markets within the Middle East and North African region. They find that most markets within their sample exhibit low levels of integration, but they also find that both global and local risks are priced

1.2 Problem Statement

Foreign equity investment can be beneficial to developing countries because of its risk-sharing characteristics. Therefore, with globalization, frontier markets can become increasingly attractive destinations for international investors, who are seeking a higher return than what is available in the developed economies. Stock markets of developing countries have become more, although not fully, integrated with world financial markets, and this increased globalization implies lower risk-adjusted equity returns, which is possible by diversifying the risk.

The correlation between returns of emerging markets with developed markets is lower than that of the return available in the developed economies; hence the risk return profile of the portfolio can be improved reports Aggarwal, Inclan, & Leal (1999). This creates prospects of a more efficient worldwide allocation of savings and investment than what was possible earlier, when domestic investment in most countries was constrained by domestic savings. Thus, big financial investors in the developed markets, while diversifying their risk, find emerging markets a more attractive destination. Emerging markets have either negative or very low degree of correlation with established markets (Bekaert, Harvey, & Lumsdaine, 2002).

From an asset-allocation perspective, cross-market correlations are tend to be informational, but Carrieri, Errunza, & Hogan (2007)argue that they do not provide a complete and accurate measure of diversification benefits or overall integration. They provide the example of Zimbabwe, in which a high correlation between the worldwide price of copper and the national market does not indicate a highly integrated capital market. Even though globalization has low correlations in frontier markets, it has brought with it challenges that have made the equity market in Africa to devise

means of staying competitive not only in the local market but also in the global market This study analyses the effect of globalization in equity returns within the African market.

1.3 Research Objectives

The aim of this study is to examine the effect of globalization on the equity returns in the Kenya

1.4 Research Hypothesis

The research hypothesis in this study is:

H_{01}: There is no effect to the equity returns in frontier markets by globalization

H_{A2}: There is an effect to the equity returns in frontier markets by globalization

1.5 Significance of the Study

It would benefit participants in the international business by advising them on whether or not they can take advantage on the need to go global in the stock market. The findings of this study will confirm whether or not equity returns effects exist in globalization. Also the study will help investors decide whether to invest in the African market. The findings of the study will act as a guide to policy makers in analyzing the impact of globalization on financial performance and in analyzing the different measures that have to be undertaken by capital markets in order to improve financial performance.

2 LITERATURE REVIEW

This chapter is divided into three sections. The first section reviews globalization and integration, the second section reviews globalization and equity returns, the third section reviews globalization and developing countries.

2.1 Globalization and Integration

Financial market globalization has significant impact on international investment decisions. The continuous opening of African markets to foreign investors is expected to increase their level of globalization relative to the world market. In his study Boamah (2013) investigates the world and emerging market integration of a sample of eleven African stock markets. The research provides evidence that the emerging and world market factors command a premium on the African markets. The evidence is consistent with Errunza, Losq, & Padmanabhan (1992), and Choi & Rajan (1997), indicate investors assuming completely segmented African markets are most likely to overestimate their diversification potentials. The findings indicate that integration of the African stock markets has changed through time. This may be the outcome of changing global economic conditions and the level of openness and accessibility of the African markets.

A study conducted by Mishkin (2006) examines how opening financial markets to foreigners promotes financial development. He argues that globalizing the domestic financial system by opening financial markets to foreigners encourages financial development and growth. This means that opening financial markets to foreign capital directly increases access to capital and lowers its cost for those with productive investments. In their study Syrtinov, Krume, & Vlatko (2013) agree that financial globalization creates tremendous potential benefits for developing countries and emerging markets, as they integrate financially with the rest of the world. The researcher observes that globalization stimulates the development of the financial sector and, in turn, spurs the advancement of economies.

The researchers reveal the positive effects of financial globalization but it also carries some risks. One well-known risk is that globalization can be related to financial crises. For example the 1973 oil crisis which caused short and long term effects in the global economy such as increase in oil prices. The financial crisis of 2007–2008, also known as the global financial crisis and the 2008 financial crisis, is considered by many economists to have been the worst financial crisis since the Great Depression of the 1930s. The GFC affected China more than India because of its higher

degree of economic globalization (Stulz, 1999). That is, China experienced a higher degree of shock than India. China's sizable fiscal program, which was supplemented by monetary and bank lending policies, acted as the cushion to absorb the impacts of shocks (Glick & Spiegel, 2010). The state's control on the economy provided a further resilient force resisting the impact. On the other hand India was not hurt as much because of its lower degree of globalization (Glick & Spiegel, 2010). Thus had there been a bigger shock, the Indian economy would have lacked the cushion to act as a buffer to absorb the impact. Therefore the degree of shock to an emerging economy associated with GFC is a function of the economy's global integration.

The concern that financial globalization can sometimes spin off negative side effects in developing economies is a legitimate one, though not necessarily debilitating. The critical question in this entire literature is whether empirical evidence can guide us on why financial globalization seems to have clearly positive effects in some cases, whereas it appears to be counterproductive in others.

2.2 Globalization and Equity Returns

The effects of globalization on asset prices have been examined before in a variety of researches, but most articles have focused on one asset price, equities being the most popular. In their study Bekeart & Harvey (2000), Bekaert, Harvey & Lumsdaine (2002) and Kim & Singal (2000) investigate many characteristics of equity market data, including correlations with world market returns. They find that globalization increases the correlation with world market returns. Therefore increase in globalization has been the most important cause of growing correlations.

In his research Bekaert (2009) examines whether globalization has led to the convergence of asset prices across the world, including equity and bond returns; real and nominal interest rates, term premiums, inflation, cash flow growth rates and price-earnings ratios. There is little evidence in favor of strong convergence over the last 30 years in the research. The stronger evidence in favor of an openness effect shows up in the dependence of global betas on openness.
This provides evidence that opening of markets through globalization have increased returns in asset prices.

A study, done by Goetzmann & Ukhov (2006) uses a long span of historical data to investigate whether global diversification strategies served investors well over the last century, and the

potential of international diversification in the future. In order to explain the benefits from global diversification, they decomposed them into the variation in the average correlation in equity markets through time and the variation in the investment opportunity set. From 1850 till 2000, all the available data on over 80 international equity markets had been collected. The analysis suggested that the structure of global correlations shifted considerably over time, and it was currently near its historical high. They found that fifty percent of the diversification benefits that achieved by investors today were due to the increasing number of new investment opportunities in the world markets; and the other half due to a lower average correlation between the recently available markets and existing markets, and among the new markets themselves.

Local investors have to bear more risk if they were free to invest internationally. In his study Stulz (1999) observes that required rates of return for holding local stocks are higher than the rates required by well-diversified, global investors for holding the same stocks. As a consequence, the prices of local shares will be lower than if the local market were integrated with global markets. To put it a little differently, local investors will demand a higher expected return to compensate them for bearing more risk in their portfolios than if they could diversify their holdings across international markets.

2.3 Globalization and Developing countries

Investors in developed countries are sending a significant portion of their funds overseas, and an increasing number of them are choosing to invest in the world's emerging markets. These markets, which were once considered the 'Third World', span Latin America, Southeast Asia, Eastern Europe, the Middle East, and Africa, and tend to be underdeveloped compared with Western industrialized countries. Developing countries are often small, politically and socially vulnerable, and have poor or nonexistent laws and regulations. A growing number of developing countries are attempting economic emergence as their governments recognize the potential of free market capitalism for creating wealth (Choong, Baharumshah, Yusop, & Habibullah, 2010).

It should be noted that theoretical and empirical literature concerning developing countries' stock markets and their economic growth is limited (that is, the African and South East Asia-SEA regions appear to be the focus of these studies). Although there is a growing body of literature, the majority

has a broad focus on developing countries as a collective group, and fails to investigate individual lesser developed countries' stock markets and their contributions to economic growth. This may be explained by a lack of suitable information and/or data on developing economies. Further, few empirical studies have focused on the issue of how to measure the soundness of equity market development in developing countries (Shirai, 2004). Thus this study aims to focus on Africa specifically Kenya and her equity market. Since investors in developed countries are sending a significant portion of their funds overseas, and an increasing number of them are choosing to invest in the world's emerging markets, effects of globalization will be demonstrated.

3 METHODOLOGY

3.1 Research Design

This study seeks to explore whether globalization has a significant effect to the equity returns in frontier markets in Africa. Equities listed in frontier markets have become increasingly investable, attracting investors that are looking to benefit in an asset class that has the potential to become a significant portion of the global equity opportunity set. Regression is employed in studying this relationship.

As it is tradition in any Panel Data study, specification tests such as Hausman (1978) are carried out to establish a suitable model, between the random effects model and the fixed effects model. Post-estimation diagnostic checks including serial correlation for the residuals and panel unit root tests are carried out to determine the robustness of the estimated model.

3.2 Data and Measurement of Variables

3.2.1 Measuring equity returns

To investigate the returns themselves (Bekaert & Wang, Globalization and Asset Prices, 2009) consider three versions for equities the actual return, the excess return (defined as the return in excess of the nominal short rate), both expressed in dollars, and a hedged excess return. The researcher approximates the former by investigating local currency actual returns.

Table 1: Measuring Equity Returns

Country	Index Name	Symbol	Foreign Investor Participation in billions
Egypt	Egypt Stock Exchange 30	EGX 30	26
Botswana	Botswana Stock Exchange	BSE	4
Kenya	Nairobi Stock Exchange 20	NSE 20	6.2

Mauritius	Stock Exchange of Mauritius	SEM	1.6
Morocco	Morocco Casablanca Stock Exchange Index	MASI	19
Nigeria	Nigeria Stock Exchange	NGSE	1.3
Tunisia	Tunisia Stock Exchange	TUNI	8.9

Table 1: It consists of the countries index names and symbols which are acceptable using Bloomberg and MSCI naming style. Since the study is on globalization, foreign investor participation has been included from the US department of State

3.2.2 Measuring Globalization

Globalization is measured in three ways. First, the KOF index by Dreher (2006) which is an acronym in for the German word "Konjunkturforschungsstelle", which means business cycle research institute; the second one is economic integration brought about by trade links and lastly financial integration brought about by free capital flows. There measurements are discussed below.

The first aspect of globalization, the researcher employs is a broad index developed by (Dreher, 2006), called the KOF index. The KOF index of globalization not only includes measurement on economic globalization, but also social and political dimensions of globalization. To represent globalization, the study uses the 1997-2013 KOF Indices of Globalization. The indices are built by organizing 23 variables of economic, political and social aspects of globalization into the three sub-indices, the principal components analysis is used to combine the sub-indices into an overall globalization index (Dreher, 2006). The data for globalization index will be obtained from the KOF index of Globalization website.

$$TheKOF\ Index\ of\ Globalization = \sum_{i=1}^{n} w_i \left(\frac{V_1 - V_{min}}{V_{max} - V_{min}}\right) * 10 \qquad \text{Equation 1}$$

Where:

i -indicates the time period

w_i-The weights attached to each contributing variables

$V_1, V_{min} and\ V_{max}$ The normal, minimum and maximum values of respective variables.

The second aspect used is economic integration. This is calculated from trade openness, (Wacziarg & Welch, 2008) built an extensive cross-country data set building on (Sachs & Warner, 1995) classification of countries in either open or closed countries based on 5 criteria. These criteria involve the magnitude of tariffs, non-tariff barriers, and state control of the trade sector. The measure displays very little cross-sectional variation towards the end of the sample, and actually doesn't fully reflect the still ongoing trend towards more openness and it cannot capture the reversal in trade openness observed since the start of the 2008-2009 financial crisis. Following the above (Bekaert & Wang, Globalization and Asset Prices, 2009) instead works with a more de facto measure:

$$TO = (X - M)/GDP \qquad \text{Equation 2}$$

Where$X$, M and GDP stands for exports, imports and GDP of the current calendar year respectively. This study adopts this measure of economic integration, denoted as TO to represent Trade Openness.

The third aspect used is financial integration which is measured by the net direct foreign investments (FDI). FDI can be viewed as a long-term persistent portfolio flow, but increased FDI also tends to increase the real links between countries through trade and technological transfers (Bekaert & Wang, Globalization and Asset Prices, 2009).

$$IO = (A - B)/GDP \qquad \text{Equation 3}$$

The researcher uses Net of FDI the difference of FDI Assets and FDI Liabilities divided by the GDP of the current calendar year.

3.2.3 Control Variables

Financial theory suggests that the dependent variable is influenced by more than one independent variable. In their study Nai-Fu, Richard, & Stephen (1986) found that the spread between long and short term interest rates, expected and unexpected inflation are risks that are rewarded in the stock market. A recent study by Flannery & Protopapadakis (2002) reports that stock market

returns are significantly correlated with inflation, money growth and interest rates. This is to mean that stock returns for the frontier markets do not depend on globalization only but also in macroeconomic variables such as inflation, foreign exchange rates, interest rates, money supply, default risks among others. Therefore, having globalization as the independent variable will not be of good use. It would be of greater interest to have more than one explanatory variable in the regression equation at the same time

Table 2: Definitions of Variables used in the study

Variable	Definition of Variables
Inflation(INF)	Inflation Rate is represented by the annual inflation rate. An increase in inflation has a negative effect on stocks as seen in previous studies (Fama & Schwert, 1997), (Balduzzi & Sousa, 2011) and (Benakovic & Posedel, 2010)
Money Supply(M2)	Money supply is represented annually. It is hypothesized that an increase in money supply has a positive effect on equity returns (Rigobon & Sack, 2002).
Term Structure of Interest Rates(R)	This will be represented by the annual 91-day treasury bill rate. It is hypothesized there exists a negative relationship between the term structure of interest rates and equity returns (Chen, Roll, & Ross, 1986). However, a recent study done by (Fearson & Harvey, 1991) shows there is a positive relationship

Table 2: The table states how the variables will be measured and states the relationship between macroeconomic factors and equity returns

3.3 Model Specification

The researcher adopts a panel analysis to examine the effect of all explanatory variables together on the explained variable which is equity returns.

$$y_{it} = \alpha + \beta' X_{it} + \mu_{it} \quad \text{Equation 4}$$

Where: $X_{it}, i = 1, \ldots, N \;\; t = 1, \ldots, T$

y: equity returns

i: the individual dimension

t: the time dimension

β': Coefficient of variation

μ_{it}: Individual-specific, time invariant effects

A positive beta indicates a positive relationship between globalization and equity returns while the vice versa holds. The closer the value is to zero the lower the degree of globalization.

3.3.1 The Hausman Test

The preliminary tests were mainly to decide whether to use random effects or fixed effects, thus the (Hausman, 1978) specification tests is applied. The null hypothesis is that the random effects model is appropriate and the alternative hypothesis is that the fixed effects model is appropriate. The test is basically testing whether the unique errors are correlated with the regressors. This will be done by running a fixed effects model in STATA then the estimates are saved and running a random effects model and also saving the estimates then performing the Hausman test.

$$H = (\beta_{RE} - \beta_{FE})'[Var(\beta_{FE}) - Var(\beta_{RE})]\text{^} - 1(\beta_{RE} - \beta_{FE}) \quad \text{Equation 4}$$

A finding that ($p>0.005$) is taken as evidence that, at conventional levels of significance, the two models are different enough to accept the null hypothesis and hence to accept the random effects model against the fixed effects model. Where the test indicates a significant difference ($p<0.005$), then the null hypothesis is accepted. This is indicated that the fixed effect is preferred to random effect. Panel diagnostic tests will be carried after the relationship has been established.

3.4 Limitations of the Study

The KOF index when the study is being done is up to 2013 thus limiting the results of the study by not bringing it to the present.

This study makes assumption regarding the countries stock exchange that equity returns reflects everything that has or could affect the country.

4 DATA ANALYSIS

4.1 Introduction

As stated in the methodology this study data analysis will be done in three steps to measure globalization. The dependent variable in the model is equity returns and it is defined as the logarithm of equity indices to reduce skewness. The researcher uses three indicators as control variables of equity, namely inflation, money supply and 91 Treasury bill rates. The panel data for the 8 African countries is regressed in Stata. This is after carrying out the diagnostic checking tests and the unit root tests. The Hausman test was carried out before where the null hypothesis was accepted that Random effects model is appropriate.

4.2 Diagnostic checking

A test is performed on the three models to check whether there is serial correlation in the residual. The null hypothesis states that there is no serial correlation in the random effects model.while the alternative hypothesis states that there is serial correlation in the random effects model.

For the KOF index model the p-value is equal to 0,the economic integration the p-value is equal to 0,the financial integration the p-value is equal to 0. Since all models serial correlation is measured to be zero, then it means there is no correlation, and each of the observations is independent of one another. Essentially, variables that are serially correlated don't have pattern and are random.

4.3 Unit root tests

4.3.1 Hadri LM test

It is worth noting that the Levin–Lin–Chu test requires that the ratio of the number of panels to time periods tend to zero asymptotically. This is not well suited to datasets with a large number of panels and relatively few time periods. Therefore, the researcher uses the Hadri LM test, which assumes that the number of panels tends to infinity while the number of time periods is fixed, to test whether equity indices in our entire dataset of 8 countries contains a unit root. Here the

researcher finds overwhelming evidence against the null hypothesis of a unit root and therefore conclude that equity indices are stationary.

4.3.2 Levin-Lin-Chu unit-root test

The null hypothesis is that the series contains a unit root, and the alternative is that the series is stationary. The Levin–Lin–Chu test assumes a common autoregressive parameter for all panels, so this test does not allow for the possibility that some countries' equity indices contain unit roots while other countries' equity indices do not. The Levin–Lin–Chu test with panel-specific means but no time trend requires that the number of time periods grow more quickly than the number of panels, so the ratio of panels to time periods tends to zero. The test involves fitting an augmented Dickey–Fuller regression for each panel; the researcher inputs the number of lags to be 1 for optimum. The Levin–Lin–Chu bias-adjusted t statistic is −2.0098, which is significant at all the usual testing levels. Therefore, we reject the null hypothesis and conclude that the series is stationary.

4.4 Globalization effect to Equity Returns

From the results, KOF index, inflation and Treasury bill Rates are seen to have an effect on the equity index as their p-values are less than 5%. The chi square test that all the random effects parameters (excluding the intercept) are simultaneously zero. This shows that the model is significant. R^2 of 0.4543 says that this model accounts for 45%percent of the total variance in globalization of equity indices.

Coefficients in random effects models are interpreted in the same way as in ordinary least squares regressions. So a coefficient of 0.085 means that KOF index has 8.5% effect to equities. In addition, when one looks at the p-value of this coefficient the researcher notices that it is significant. For this reason, we can say the KOF Index has the highest effect to equity returns as compared to inflation and treasury bills rates.

Index Ln	Coefficient	Standard Error	Z-value
KOF	0.0085	0.0092	9.20
Inflation	0.0053	0.0029	1.85
M2	-0.0017	0.0044	-0.41

T-bill	-0.0198	0.0136	-1.45
Constant	1.1945	0.8190	1.46

Table 3: Results of the KOF index show the coefficient of variation in the stock market which helps to determine the amount of volatility in comparison to the expected return rate. The standard error measures the accuracy with which the data represents and the z-value is the probability that the researcher has falsely rejected the null hypothesis that there is no effect to the equity returns in frontier markets by globalization

From the results, trade openness, inflation and Treasury bill Rates are seen to have an effect on the equity index as their p-values are less than 5%. The chi square test that all the random effects parameters (excluding the intercept) are simultaneously zero. This shows that the model is significant. R^2 of 0.1045 says that this model accounts for 10%percent of the total variance in globalization of equity indices.

Coefficients in random effects models are interpreted in the same way as in ordinary least squares regressions. So a coefficient of 0.096033 means that trade openness has 9.6% effect to equities. In addition, when one looks at the p-value of this coefficient the researcher notices that it is significant. For this reason, we can say the trade openness has the highest effect to equity returns as compared to inflation and treasury bills rates.

Index Ln	**Coefficient**	**Standard Error**	**Z-value**
Trade Openness	-0.0181	0.0156	-1.16
Inflation	0.0092	0.0038	2.48
M2	-0.0006	0.0059	-0.09
T-bill	-0.0374	0.0175	-2.14
Constant	5.9384	0.6912	8.57

Table 4: Results for Economic Integration show the coefficient of variation in the stock market which helps to determine the amount of volatility in comparison to the expected return rate. The standard error measures the accuracy with which the data represents and the z-value is the probability that the researcher has falsely rejected the null hypothesis that there is no effect to the equity returns in frontier markets by globalization

From the results, foreign direct investments, inflation and Treasury bill Rates are seen to have an effect on the equity index as their p-values are less than 5%. The chi square test that all the random effects parameters (excluding the intercept) are simultaneously zero. This shows that the model is

significant. R^2 of 0.1992 says that this model accounts for 19%percent of the total variance in globalization of equity indices.

Coefficients in random effects models are interpreted in the same way as in ordinary least squares regressions. So a coefficient of 0.096033 means that trade openness has 9.6% effect to equities. In addition, when one looks at the p-value of this coefficient the researcher notices that it is significant. For this reason, we can say the trade openness has the highest effect to equity returns as compared to inflation and treasury bills rates.

Index Ln	**Coefficient**	**Standard Error**	**Z-value**
Net FDI	0.0960	0.0237	4.05
Inflation	0.0091	0.0035	2.63
M2	-0.0015	0.0053	-0.27
T-bill	-0.0363	0.0163	-2.22
Constant	5.6446	0.6804	8.33

Table 5: Results for Financial Integration show the coefficient of variation in the stock market which helps to determine the amount of volatility in comparison to the expected return rate. The standard error measures the accuracy with which the data represents and the z-value is the probability that the researcher has falsely rejected the null hypothesis that there is no effect to the equity returns in frontier markets by globalization

Note that for the three models, in the last section, it gives the random effect estimated values. This represents the estimated standard deviation in the intercept on the logit scale. Had there been other random effects, such as random slopes, they would also appear here. Sigma _u and sigma are, respectively, estimates of the standard deviation of U_i (individual fixed effect) and e (stochastic error thus it changes among individual and through time).

5 CONCLUSION AND RECOMMENDATION

In the global market, investors are more interested in ways of diversifying their portfolio to maximize returns. The equity market in developing countries seems to be picking up this trend although reliance on their markets is still growing. In this study, the researcher analyzes whether globalization affects equity returns.

Globalization was measured in three ways. Under the KOF index and financial integration, globalization was seen to have a positive correlation with equity returns. This is contrary to economic integration which has a negative relationship. This could be due to unfavorable international trade between Africa and the rest of the countries (Adusei, 2013).

These research attempts to measure globalization as a whole or just the economic dimension, and also the financial dimension are made to assess the extent and intensity of a countries' integration into the global system. Evidence gathered from the above analysis leads to the conclusion that globalization indeed affects equity returns positively. The continuous opening of African markets to foreign investors is expected to increase their level of integration relative to the world market

Although the researcher is confident that frontier markets provide diversification benefits to international investors, further studies are needed to address remaining issues related to asset pricing in frontier markets.

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