Country Risks In Selected World Economies: Application of Niche Methodology [§]

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ABSTRACT

Estimated betas play an important part in measuring country risk. Beta estimation through regression is the simplest but effective way despite the criticism leveled on regression estimation methodology for its inability to handle outliers, 'regressioneering' possibilities, working with restrictive assumptions and estimating lower values, OLS has still remained a widely used method. There are verities of beta estimation methods, choice of variables and data periods in order to arrive at accurate estimates. In country risk calculations, the easiest way is to use return from world markets. Among the choices of estimation methods, other than OLS line, are the reverse regression, relative volatility with correlation for sign, niche regressions and line-beta (where slope is the geometric mean of the slopes from the two least squares regressions). Based on the use of multi criteria decision making tools like fuzzy-analytical hierarchal process (AHP) and ordinary AHP, beta corrections in this article has been made with niche regressions for eleven non-Asian economies. In return, betas from OLS regression, reverse regression, niche regressions and line that passes through the centroid of the data has been put out for comparison. This may be more effective strategy, albeit with caution, in order to moderate the cognitive biases of the investor community.

Keywords: Estimation Risk Reduction; Multi-Criteria Decision Making; Sovereign Risk Beta

1. INTRODUCTION

Global financial crisis of 2008 has not only skewed the data sets by generating extreme values for particular years in the financial markets and macroeconomic variables. "Investing in an emerging country, such as some countries in Latin America, Southeast Europe and Asia, is considered riskier than investing in big and developed markets like

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the USA, Japan and Western Europe countries. Certainly, the returns on investments are also higher in the emerging markets. The estimation of the required rate of return in the case of developed markets is mostly carried out with the CAPM. Although its theoretical fundamentals are widely accepted, its weaknesses in practical application are also generally recognized. The required rate of return is more difficult to assess in the case of emerging markets. Most academics agree that, in the required rate of return, the country risk must be rewarded with a country risk premium (CRP) over an equivalent investment in a developed country" (Naumoski; 2012). The outliers in the financial data generated by financial crisis has made international investment decisions even more cumbersome as one of the implications of the skewed data is that it is affecting the coefficients calculated by the methodologies which are inherently incapable of handling the outliers like regressions. This is especially true if we are thinking of making investment in one particular country because of any thinkable reasons and thus not diversifying our investments across various countries. This brings in concentration risk. "If country risk is not diversifiable, either because the marginal investor is not globally diversified or because the risk is correlated across markets, we are left with the task of measuring country risk and estimating country risk premiums" (Damodaran; 2013). Thus the most affected coefficients from this presence of the outliers in the data are sovereign risk or country risks estimations which started painting an exaggerated risk picture regarding the country's risk because of the inability of the regression technique used for the estimation of sovereign risk beta to handle outlier data effectively. This exaggerated risk picture of various economies has the potential to negatively affect the flow of foreign investments and thus may have enormous impact on the development efforts of the governments to attract foreign capital. The data obtained after the world financial crisis carried outlier components in data as it generated and exceptionally deviant series for few quarters and even years as compared to historical trends of these series.

Based on rationality assumption, in standard finance most of the investment calculations are based on Miller and Modigliani's arbitrage pricing principles, the Markowitz's portfolio principles, Sharpe's capital asset pricing model (CAPM), Black, Scholes, and Merton's option pricing theory and calculations of the sovereign risk beta. There are two broad approaches for the estimation of the country risk premiums. One approach is known as historical risk premium plus approach. The other approach is known as implied premium approach where we estimate the equity risk premium by looking at how the market prices stocks and expected cash flows. According to Damodaran (2013), there are several measures of country risk under historical risk premium plus approach and one of the simplest and most easily accessible is to use the sovereign ratings assigned by ratings agency. The others are Bludgeon approach, lambda approach and the beta approach. Our focus is the use of beta approach and its relevance in the presence of the outliers by focusing on the estimation of country betas.

Harvey(2004), Erb, Harvey, and Viskanta (1996) has conducted the correlation analysis of the ratings with mean returns, volatility, beta and skewness. In the context of countries considering with equity markets only they have examined the beta calculated against the Morgan Stanley Capital International World Index. The correlation of the composite risk measure and beta is positive and is 0.16 for in the all country sample and there is a sharp negative correlation between volatility and the risk measures, as per

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intuition, meaning that the lowest (highest) rated countries have the highest (lowest) equity return volatility and this volatility is robust across all risk measures. In order to compare betas from various estimation techniques like OLS regression, reverse regression, Be-ALAM-AZAM regression and FAIZ-AZAM regression, current study has used betas from eleven world economies in order to make the point for the niche regressions. The study has been divided into four sections. After introduction comes review of literature in section 2, followed by description of data and methodology in section 3 and finally the results in section 4.

2. REVIEW OF LITERATURE:

Prediction of stock market returns has been the corner stone in the studies of capital movements either of speculative finance or foreign direct investments as market and sovereign risks are the major components in the investment return estimation. "The central debate in the academic literature and in practice in the last decades is how to define the risk, how to measure risk, and how to convert the risk measure in an expected return on investment to compensate for the risk assumed. In the risk and return models used for valuation and in corporate finance, it is crucial to estimate the risk premium for average investment, called market risk premium or equity risk premium. This is vital for the Capital Assets Pricing Model (CAPM), which is the most used model in academic and practical analysis nowadays" (Naumoski; 2012). Traditional approaches in the field of stock return predictability concentrates on predicting the market premium are based on an earlier sample period, few predictive models and apply a different methodology. The frontrunner model is the linear model to predict premiums using either testing of the predictive power of one single variable approach, multifactor models' approach or model selection approach (Steiner; 2009). Even lower levels of predictability could have been exploited in simple investment strategies. The literature on stock market return predictability suggests that prediction is possible and includes broad coverage of variables used, techniques applied, and time periods analyzed. Steiner (2009) has used an alternative approach of investigating the out-of-sample predictability of the monthly market premium, as well as the monthly size, value, and momentum premiums by evaluating the aggregated results from the 1,024 models. Besides there are various variables used in the prediction of the stock returns in various different models and variable selection and empirical analyses is based on either financing, economic rationale and financial theory or investors' intuition (see Anjum; 2015c). Basu (2011) has applied the beta country risk model to estimate the country risk of India based on several macroeconomic indicators. Variables for Macroeconomic State of the Economy Category for the calculations of the market returns have been provided in table 1.

Besides Beta, other measures of information risk include bid-ask spreads, probability of informed trade (PIN), trading volume, information risk, dispersion in analysts' forecasts, credit ratings and spreads. Based on reporting requirements of U.S. accounting standard setters adopted in Statement of Financial Accounting Standards (SFAS) 157 (Fair Value Measurement), Riedl & George (2009) has defined a measure of information risk relevant to financial institutions, which assess the financial instruments across three levels. Level 1, 2, and 3 indicate, respectively, decreasing reliability, capturing the increasing levels of opacity and illiquidity. Besides SFAS 157, details of complex reporting requirements for financial instruments are also set under

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Statement of Financial Accounting Standards (SFAS) 115 (Accounting for Certain Investments in Debt and Equity Securities), SFAS 133 (Accounting for Derivative Instruments and Hedging Activities) and SFAS 159 (The Fair Value Option for Financial Assets and Financial Liabilities).

Table 1: Predictive Variables for the Market Returns: Macroeconomic Category

Economic Fundamental	(Steiner; 2009): Chen et al. (1986), Fama(1990), Chen(1991), Cheung and Ng (1998) , Choi et al.(1999), Dickinson (2000), Nasseh and Strauss(2000); Basu (2011):
Macroeconomic Variable	(Hasan & Zafar; 2008): Roll and Ross(1980), Fama(1981), Chen et al.1(986), Hamao(1986), Faff(1988), Chen(1991), Maysami and Koh(2000), Paul and Mallik (2001); Basu (2011):
Inflation (in Steiner; 2009) & (in Hasan & Zafar (H&Z); 2008))	(Steiner; 2009): Lintner (1975), Pesaran and Timmermann (1995), Levis and Liodakis (1999), Avramov (2002), Bauer et al. (2004), Campbell and Vuolteenaho (2004), and others.
	(Hasan & Zafar; 2008): Maysami et al (2004); Firth(1979), Kessal (1956), Ioannidis et al. (2004), Gultekin(1983), Boudhouch and Richarson(1993), Amidhud (1996), Akmal (2007), Paul and Mallik (2001), Mark (2001); Amidhud (1996), Chan, Chen and Hsieh (1985), Chen, Roll and Ross (1986), Burnmeister and Wall (1986), Burmeister and MacElroy (1988), Chang and Pinegar (1990), Defina (1991) Kryzanowski and Zhang (1992), Chen and Jordan (1993), Sauer(1994), Rahman, Coggin and Lee (1998), Fama (1981), Spyrou (2001), Amidhud (1996); Basu (2011):
Money supply (Steiner; 2009) & (H&Z; 2008)	(Hasan & Zafar; 2008): Maysami et al (2004), Beenstock and Chan (1988), Sauer (1994), Shahid (2008)
	(Steiner; 2009): Rozeff (1974), Pesaran and Timmermann (1995), Jensen et al. (1996), Black (2002), Bauer et al. (2004), and others.
CWR (in Steiner)	Lettau and Ludvigson (2001) and Goyal and Welch (2006)
Industrial Production (in H&Z)	Maysami et al (2004), Chan, Chen and Hsieh (1985), Chen, Roll and Ross (1986), Burnmeister and Wall (1986), Beenstock and Chan (1988), Chang and Pinegar (1990), Kryzanowski and Zhang (1992), Chen and Jordan (1993), Sauer (1994), Rahman, Coggin and Lee (1998), Chen, Roll and Ross (1986), Shahid (2008)
Oil prices (in H&Z)	Chen, Roll and Ross (1986)
EX Rates (in H&Z)	Shahid (2008), Maysami et al (2004); Basu (2011)
FPI (in H&Z)	Shahid (2008)
CPI (in H&Z)	Chen, Roll and Ross (1986), Paul and Mallik (2001), Basu (2011)
Cons. US (in H&Z)	Chen, Roll and Ross (1986)
SA-GDP (H&Z)	Paul and Mallik (2001)
ASX (in H&Z)	Paul and Mallik (2001)
Exports (in H&Z)	Shahid (2008); Basu (2011)
Notes: (1) Extracted by Author from various sources (see references); (2) Author (Year): = the quotes are from this study until ";" mark; (3) Meanings of Symbols: ASX = ASX Banking and Finance Index; CPI = Consumer Price Index; SA = seasonally adjusted; FPI = foreign portfolio investment; CWR = consumption-wealth ratio; EX Rates = exchange rates; Cons. US = consumption for US; P/E ratio = Price Earnings ratio; H&Z = (Hasan & Zafar: 2008);	

Based on the capital asset pricing model (CAPM), beta equation is a linear regression equation. In country beta case, linear regression equation is also applicable with different variable than CAPM and also meanings of the signs of beta will be reverse in country beta as compared to CAPM beta. Assuming constant α & β and R as returns in country beta estimation, we get Var ($R_{country}$) = β Var (R_{world}) + Var (ε) i.e. total variance is composed of two components i.e. market risk (or systematic or non-diversifiable risk) and investment specific risk (or Unsystematic or diversifiable risk) (Schroeck: 2002). Balance sheet identity based model gives us equation βE (E/A) = βA

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FVA – βD Leverage; where FVA is the firm's fair value of assets, βE (E/A) is adjusted beta and Leverage=D/TA). The Riedl & George (2009) has used adjusted beta decompositions (i.e. [ρ_{im} (E/A)] and [σ_i / σ_m (E/A)] as alternative dependent variables to better isolate the association between risk and the fair value level 1, 2, and 3 designations. Further, both are measured using daily stock returns (R_i) over fiscal quarter t, using the value-weighted stock market return as the benchmark for market (R_m). A reader fond of exploring the consolidated balance sheet (CBS) identity can take a look at Chaudhary et el (1996).

The sovereign or country risk can be measured in various ways. Naumoski (2012) has stated various ways from the literature. First is that a country's credit or default risk, instead of country's equity risk, can be the country's sovereign credit rating assigned by either S&P, Moody's and/or Fitch. The sovereign credit or default rating of a country can be converted into a country risk premium. Damodaran (2011), for each sovereign credit rating, has determined a typical imputed or synthetic default spread expressed by Moody's sovereign rating besides suggesting the use of bond default spread, credit swap default spread and relative standard deviation of the stock markets. Default spread plus relative standard deviation is also a variant, besides Porras (2011) saying that equity market volatility can be considered a good measure of country risk.

Naumoski (2012) has taken up the position that the country risk is relevant for investments in the emerging countries and that it should be rewarded with a risk premium thus arguing that the country risk is non-diversifiable and has a market component, therefore it should be rewarded with a risk premium. Application of this model in the estimation of the cost of equity for investing in the emerging markets comes upon several problems. In these countries, as Estrada (2001) notes, beta and stock returns are largely uncorrelated. Harvey (1995) in an early research paper finds that in these markets the betas are very low, which when they are applied as an input in the CAPM, generates "too low" required returns. Thus various studies have suggested alternative ways for the estimation of the cost of equity in the emerging markets. These first method is that of an adjusted CAPM with two types of adjustments i.e. either by adding to the risk-free rate the difference between the yield of emerging market bond denominated in USA dollars and the yield of a comparable USA market bond or by using an "adjusted beta"(calculated as 60% of the ratio between the standard deviation of returns in emerging markets and the standard deviation of returns in the USA market). Other variants of the alternative approaches can be based on country credit rating or country risk attached to the country by the relevant rating agencies, the required return on investment is determined by the time-varying weighted average of the global beta and a local standard deviation, the downside risk methodology using the various forms of semi-standard deviations (Naumoski: 2012).

3. DESCRIPTION OF DATA AND METHODOLOGY

In order to estimate beta, we want to estimate the slope of the functional relationship between x and y whether by OLS or reverse regression. Basu (2011) has run ordinary least squares regression and on the white noise (unexpected component) of macroeconomic variables to explain the variation in country risk to identify the most

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relevant of these variables. Erb, Harvey and Viskanta (1996), by using Auto-Regressive Integrated Moving Average (ARIMA) model is run on each of the macroeconomic variables to filter out the expected components, have shown that the difference between the returns of a country's equity market and the world equity market may be attributed to the country risk through the relationship shown as: $R_{Equity\_Country} = \alpha + \beta R_{Equity\_World} + et$; where β is the basic measure of country risk and in this form as β increases, country risk decreases. It means that the returns in the country are affected only by factors common to the rest of the world, which is essentially a non-diversifiable risk for a particular country. This is because based on the *Efficient Market Hypothesis* of Fama (1965), only unexplained shocks in the explanatory variables affect country risk, since market expectations get incorporated into R_{Ind} and R_{World}. The estimation details and slope characteristics of OLS line, the reverse regression and line betas have been provided in (Tofallis: 2008). A sensible approach is to choose one that carries the rational roles of beta in the past. First role is relative volatility (i.e. relative to market) and logical estimator is (σ_i / σ_m) and as it is always greater than zero, we need correlation (ρ) to assign a sign to it. Alternative estimator defined by (Tofallis: 2008) is β^* [= (sign of ρ) σ_i / σ_m] or the equivalent form which uses the standard deviations of the excess rates of return. Its connection with standard OLS beta is shown as: $\beta^* = \beta / \rho$. The reverse regression slope is given by β / ρ^2 and this shows how large the differences in regression estimates can be based on values of correlation. For the usual case of positive correlation, standard beta gives the lowest value and the reverse regression the highest i.e. $\beta_{OLS} \leq \beta^* \leq \beta_{reverse}$.

There are multiple solutions available in the literature to tackle outliers. One of such methodologies is labeled as niche regressions. The use of AHP in ranking the data mining algorithms and predictive classifiers (Anjum: 2013a and 2014a) has been extended to rank regressions in this study using various countries' betas (Nathaphan & Pornchai: 2010). Fuzzy AHP approach and niche regressions have been described in Kusawandari (2004) and Anjum (2014b) respectively and the later study shows that the value of betas is less than the normal OLS beta thus higher country risk. Betas often play a part in the construction of risk-adjusted measures of performance and these are subsequently used for ranking the desirability of investments. In investment case, the idea of beta is that if two investments have the same total returns, we should prefer the one that has been less volatile. Although non-parametric approaches to risk-adjusted performance measurement are a currently active area of research, however, fund manager's alpha is commonly used as a measure of performance that takes into account the level of risk taken (as measured by beta). Beta, being a measure of systematic risk, gives volatility, a measure of risk, is measured by the standard deviation of the rates of return (Anjum: 2014c). Tofallis (2008) has provided an alternative way to standard beta estimator which is called a line fit (let's call it line-beta). Remarkably, it provides a slope that is precisely the ratio of the volatility of the investment's rate of return to the volatility of the market index rate of return (or the equivalent excess rates of returns). Hence, this line fitting method gives an alternative beta, which corresponds exactly to the relative volatility of an investment - which is one of the usual interpretations attached to beta. This slope value lies between the slope values arising from ordinary regression and reverse regression. Although ordinary least square (OLS) continues to be by far the most frequently used method even when it is obviously inappropriate, hundreds if not thousands of regression lines with too-small slopes are being published

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annually (Riggs et al.; 1978). Besides it is hard to avoid the problems of regressioneering (Anjum: 2014c). For any given data set, the absolute value of line beta will be higher than that of standard beta implying that alpha values will be revised downwards and so is for the rating of investment managers or funds. As line beta allows for consistency between its standard interpretation (as relative volatility) and the formula used for its calculation, thus is a more logical classifier of stocks (aggressive or defensive). If we classify the defensive and aggressive stock market securities based on various beta measures like β_{AZAM}, β_{OLS}, β^*, $\beta_{AZAM\text{-}reverse}$, $\beta_{reverse}$ and $\beta^*_{Average}$, and then take these various classifications as scenarios to make judgment for the better scenario in the classification of aggressive or defensive stocks.

Table 2: NGTPS for TP, SP1 and SP2 Regressions for eleven Emerging Economies

Name	TP	SP1	SP2	Name	TP	SP1	SP2
Turkey (TK)	0.36	0.40	0.24	**Brazil (BZ)**	0.36	0.39	0.25
Poland (PO)	0.31	0.37	0.33	**Argentina (AR)**	0.45	0.32	0.24
Hungary (HY)	0.38	0.43	0.18	**Chile (CL)**	0.2	0.40	0.40
Mexico (MX)	0.34	0.38	0.29	**Columbia (CO)**	0.30	0.27	0.44
South Africa (SA)	0.36	0.40	0.24	**Peru (PU)**	0.40	0.29	0.36
	Russian Federation (RF)			0.36	0.40	0.24	

Besides, six alternative approaches in constructing an optimal portfolio use portfolio performance measures have been provided in Nathaphan & Pornchai (2010). Portfolio performance can be measured either from differences between ex-ante-and ex-post-average return values (lower value is desired), deviation between ex ante and ex-post-average excess portfolio risk (lowest is optimal), expected utility (higher is better), Sharpe's ratio (higher is good), Treynor measure, Jensen measure, extensions to Jenson alpha, Tracking error, information ratio and Sortino ratio etc. Various beta measures have great contribution in measuring the right portfolio performance measures as well. which can not only give the right estimation of stock returns rather better measure of beta can also influence the estimation of volatility of stock returns. Beta can also be either directly used in performance measures like Treynor and Jensen measures and also indirectly in other portfolio performance measures through it part in the calculation of the volatility.

The focus of this study is to apply niche regressions, which have been described in Anjum (2015), for the calculation of the sovereign or country risk beta for the 11 emerging economies from Europe, South America and Africa. These economies are Turkey, Russian Federation, Poland and Hungary from Eastern Europe, South Africa and Mexico, Brazil**,** Columbia, Peru, Argentina and Chile from South and North Americas. AHP technique has been in order to rank the six Islamic Banks based on the availability of Shariah financial products (Anjum: 2015a). Analytical Hierarchy process (AHP) related risk measurement technique has been applied to private cloud computing related risks in banking industry in Anjum (2016a and 2016c), for Basel penalties in Anjum (2016b) and in order to rank the six Islamic Banks based on the availability of Shariah financial products (Anjum; 2014e and 2015b). Best Auto Logic AHP-mated (Be-ALAM) regression scoring methodology, has been used by Anjum (2014a). Be-

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ALAM regression approach is a derivative of fuzzy AHP intelligent Zax (FAIZ) method from Anjum (2014c). Among other regressions, Shamim et al. (2013, 2014 and 2017) has used logistic bivariate model to test the adoption based diffusion of innovations, a logit model and frontier approach respectively in case of Japanese banks. It has followed the approach used by (Anjum: 2013a) and (Anjum: 2014a) in the cases of ranking the data mining algorithms and predictive classifiers.

Table 3: Top NGTPS Regressions and α & β Values for Respective Regressions

	BA/F	**α-BA/F**	**α-FW-A**	**α-AW-A**	**β -BA/F**	**β -FW/A**	**β -AW/A**
TK	SP1	0.0664	0.04	0.0394	1.2406	1.105	1.1027
RF	SP1	0.0365	0.023	0.0223	1.6427	1.4295	1.4255
HY	SP1	0.0253	0.014	0.0138	0.8654	0.821	0.8198
MX	SP1	0.0142	0.01	0.01	0.8014	0.7043	0.7028
BZ	SP1	0.0129	0.01	0.0098	0.9865	0.9049	0.9035
SA	SP1	0.0108	0.008	0.0075	0.7489	0.6864	0.6852
PO	SP1	0.0157	0.006	0.0061	0.7206	0.7171	0.7171
CO	SP2	0.0163	0.007	0.0066	0.5128	0.444	0.4425
PU	SP2	0.0058	0.004	0.004	0.5697	0.5147	0.5136
AR	TP	0.0033	0.005	0.0053	0.7899	0.8172	0.8135
CL	SP1 & SP2	-0.0012 &0.004	0.001	0.0011	.5974 & 0.3268	0.4616	0.4617

Note: 1. Name of top NGTPS Regression(s) in the first column and Values of α & β for FAIZ/Be-Alam, FW-AZAM & AW-AZAM Regressions in other columns; 2. If two enteries in cells are separated by (/) then first entery is for AW and second entry after (/) is for FW; 3. If there is an ampercent (&) between two enteries, it means that there was a tie between both enteries (i.e. SP1=SP2) and thus both are equally an answer for both AW and FW (e.g. SP1 & SP2);
4. If only one entry is provided, then this one entry is only answer to both AW & FW.

The Fuzzified pair-wise comparison matrix and the scores for medium attitude have been taken from Anjum's study. The normalized weights obtained from fuzzy AHP with moderate attitude for AS, SI, OE, RO, QC are 0.4425, 0.2714, 0.1717, 0.0828 and 0.0316 respectively. Minmax based scoring system gives scores to different scales thus eliminating the problem of incommensurability (Anjum: 2014b). Finally minmax score of each of five criteria has been multiplied with Fuzzy AHP weights for each criteria to get normalized GTPS (or NGTPS) for each country and have been provided in Table 2. For each of the eleven emerging economies, second column of Table 2 shows that which regression (from TP, SP1 and SP2 Regressions) got the highest NGTPS score based on fuzzy AHP weights (FW) and/or crisp AHP weights (AW). AZAM regression is obtained after taking the weighted average of alternatives (i.e. regressions for TP, SP1 and SP2 for each of all 11 countries). Table 3 shows the values of α from FAIZ (F) and/or Be-ALAM (BA) (α-BA/F in third column), FW-AZAM (i.e. α-FW-A in fourth column) and AW-AZAM (i.e. α-AW-A in fifth column) and values of β FAIZ and/or

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Be-ALAM (sixth column), FW-AZAM (seventh column) and AW-AZAM (eighth column), for each of the eleven emerging economies. The AZAM regression obtained from regressions ranked using AHP (fuzzy-AHP) weights is called AW-AZAM (FW-AZAM).

4. RESULTS

Basu (2011), in his study on Indian data, has shown that the variation in country risk is highly correlated with changes in foreign direct investment (FDI) flows, interest rates (monetary policy), exchange rates and the unemployment rate. In the study as β increases, it means that the country risk decreases which in turn means that the returns in the country are affected only by factors common to the rest of the world, which is essentially a non-diversifiable risk for a particular country. Thus we can assume that when the country risk is lowered through the right application of the right methodology for beta estimation, the case to attract the FDI can be reflected through it. Table 3 shows the regression for the sample period 1 (SP1) came as the superior based on multi-criteria evaluation for majority of countries except for Argentina where total sample (or TP) has outperformed, Chile where SP1 and SP2 were equal in ranking and Columbia & Peru for which SP2 was superior. Besides, values of β using FAIZ and Be-ALAM regression (sixth column), of β using FAIZ and FW-AZAM (seventh column) and of β using AW-AZAM (eighth column) for two countries are above 1 and for all the rest of the countries are less than one. The AZAM regression obtained from regressions ranked using AHP (fuzzy-AHP) weights is called AW-AZAM (FW-AZAM). The two economies which have higher than one value for the beta, amongst the eleven emerging economies taken up in our study, are Turkey and Russian Federation. Thus by use of niche methodologies to tackle the issue of data outliers have made country risk less sever for these two economies. This concludes that these two countries may still remain robust economies when it comes to attracting the FDI and in designing their economic development agendas. The beta and alpha values for other countries can be read from the table 3. The higher the country beta, the lower the non-diversifiable risk for the country is. It is because normally the independent variable used in the calculation of the sovereign risk is return or income in the world economies. In the application of required rate of return, the country risk must be rewarded with a country risk premium (CRP) in the estimation of the cost of equity for investing in the emerging markets has several implications. For example, beta and stock returns are largely uncorrelated (Estrada: 2001) as well as the betas in these markets are very low, which when they are applied as an input in the CAPM, it generates "too low" required returns (Harvey: 1995). All this means that niche regressions may be used to incorporate an alternative view of the situation while making the international investment decisions and for the assessment of the country specific risks.

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