

International Diversification When Equity Returns and Exchange Rates Are Correlated

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Abstract

In this paper we investigate the diversification effects when stock market returns are correlated with foreign exchange rates. We first show that when equity markets and currency market are correlated, even an identical equally weighted portfolio using equities from two countries will yield different diversification effects depending on which country's currency the returns are measured. We develop a measure of comparative advantage in risk reduction for a pair of countries, and conduct empirical analyses on stock indices of 31 countries. The main result suggests that movements in the exchange rates tend to add risks to the investors from most of the developed countries when they invest in emerging markets, while provide hedges to the investors from most of the emerging markets when they invest in developed markets.

Introduction

It is widely argued that world equity markets are rapidly being integrated. This integration naturally increases the correlation between markets, reducing the diversification effects of international portfolios. Indeed, Longin and Solnik (1995) showed that international correlation between markets over 1960 -

1990 period has increased. In this paper, we purport to show the effects of correlation between equity returns and exchange rates on international portfolio diversification. In fact, we argue that if currency market and equity markets are correlated, the investors from a pair of countries will observe asymmetric diversification effects: if the currency market adds volatility to the total returns¹ of one country's investors, it will provide hedges to the other country's investors.

The gains from international portfolio diversification were first investigated by Grubel (1968). He extended the modern portfolio theory by Markowitz (1952) and Tobin (1958) to include foreign equities in the analysis, and showed that international portfolio diversification would bring about world welfare gains entirely different from gains from trade or from factor movements. These gains from international diversification are summarized by the extension of the efficient frontier. Later, Levy and Sarnat (1970), Solnik (1974), and Lessard (1976) collectively provide evidence of gains from international diversification.

When investing abroad, one should take the changes in the exchange rates into consideration. This is because the return from exchange rates forms an important part of the 'total return' from an international investment. The studies that took the currency risks explicitly in the analyses include Eun and Resnick (1988, 1994) and Jorion (1989). In particular, using the U.S. and Japanese bond and equity market returns, Eun and Resnick (1994) find that when the exchange rate risks are taken into account, the gains from international diversification from the U.S. investors' perspectives are mainly in terms of higher returns, whereas from the Japanese investors' perspectives, lower risks. In other words, they find that the benefits from international diversification do not necessarily take the form of lower risks.

¹ Total returns \equiv Returns on foreign equities + Returns on foreign currency.

In this paper, we steer our analysis away from the mean-variance framework and focus on the reduction of risks from international diversification. In particular, we find that the correlation between equity markets and the currency market plays an important role in risk reduction via international diversification. For example, in the case of Korea and the U.S., we find that the Korean and the U.S. equity market returns are positively correlated. In addition, the value of the Korean currency, Won, is positively correlated with the Korean equity returns. Therefore, when the returns from the Korean equity markets advance, the value of Korean Won tends to advance, and *vice versa*. As a result, from the U.S. investors' point of view, the currency market adds volatility to the total returns from an investment in the Korean equity markets. On the other hand, from the Korean investors' point of view, the currency market provides hedges to the total returns from an investment in the U.S. equity markets. This is because when the U.S. equity markets advance, the value of Korean Won tends to advance together with the Korean equities. Since the value of Korean Won is measured against U.S. dollar, appreciation of Korean Won means depreciation of U.S. dollar. Therefore, when the U.S. equity markets advance, the value of U.S. dollar tends to decline. By the same token, we can infer that when the U.S. equity markets decline, the value of U.S. dollar tends to advance. As a result, the gains from the equity markets are offset by the losses in the currency market, and the losses in the equity markets are compensated by the gains from the currency market. Therefore, to the Korean investors investing in the U.S. markets, the currency market provides hedges to the total returns. In sum, we find that if the equity markets and the currency market are correlated, the international diversification will bring about asymmetric risk reduction effects.

In the empirical analysis, we find that most of the developed markets such as Swiss, and the U.K find the currency market adding risks to the total returns when they invest in emerging markets, whereas most of the smaller emerging markets find the currency market providing natural hedges when they invest in the developed markets. We conjecture that when the investors from the large countries invest in the emerging markets, their demand for the local currency is large enough to increase the value of it, whereas when the investors from the smaller countries invest in the large countries, their demand for the currency is not large enough to move the exchange rate. If this is found to be the case, then the beta of the unhedged smaller country stock portfolios should be higher than that of the hedged portfolios. Since options and/or forward contracts on these emerging market currencies may not be

e readily available, forming a hedged small country stock portfolio may be quite costly. Then, the large country investors should require extra premium when they invest in the smaller countries unhedged.

This paper is organized as follows. In Section I, we show statistically, that if equity returns and currency return are correlated, the international diversification will result in an asymmetric risk reduction effects. Then, we develop a simple measure of comparative advantage in risk reduction under currency risks. In Section II, we describe the data. In Section III, we conduct the empirical analysis and estimate the comparative advantage in risk reduction for 31 countries. Section IV summarized the results, and suggests future research.

I. Model

In this section, we first show the asymmetric diversification effects between two countries when foreign exchange rates and the stock market returns are correlated. And then, we develop a measure of comparative advantage in risk reduction to estimate in the empirical analysis.

I.1 Statistical Model of Asymmetric Diversification Effects

We first define the return process. Let H denote the home country and F , the foreign country. For simplicity, assume that there is only one stock in each country.² Then, the total return from an investment in foreign country stock by a home country investor can be expressed as

$$\frac{(I_H^F)_1}{(I_H^F)_0} = \frac{S_1^F e_1^F}{S_0^F e_0^F}, \quad (1)$$

where $(I_H^F)_t$ is the time- t value of foreign stock held by home country investor represented in home country currency; S_t^F , th

²

Later in the empirical analysis, we use the stock market index of a country to represent this asset.

the time- t value of foreign stock represented in foreign currency; and e_t^F , the time- t value of the foreign currency in units of the home currency. Further, if we let

$$R_H^F = \ln\left(\frac{(I_H^F)_1}{(I_H^F)_0}\right), R^F = \ln\left(\frac{S_1^F}{S_0^F}\right) \text{ and } E^F = \ln\left(\frac{e_1^F}{e_0^F}\right),$$

the total return from an investment in foreign stock, R_H^F , can be expressed as a sum of the rate of return on the foreign stock, R^F , and the rate of return on the foreign currency, E^F . In other words,

$$R_H^F = R^F + E^F. \quad (2)$$

By the same token, the total return from an investment in home country stock by a foreign investor, R_F^H , can be expressed as a sum of the rate of return on the home country stock, R^H , and the rate of return on the home currency, E^H . Therefore,

$$R_F^H = R^H + E^H. \quad (3)$$

Suppose that an identical equally weighted portfolio is formed of stocks from the two countries.³ Even though the component stocks are identical, depending on which currency the return is measured, the total return—return from the stocks plus return from the foreign exchange—will have different return-risk characteristics. In order to see this, note that the variance of the portfolio measured in home currency, $Var(R_H^G)$, and that measured in foreign currency, $Var(R_F^G)$, will be

$$Var(R_H^G) \equiv Var(0.5R^H + 0.5R_H^F) = 0.25\{Var(R^H) + Var(R_H^F) + 2Cov(R^H, R_H^F)\} \quad (4)$$

$$Var(R_F^G) \equiv Var(0.5R^F + 0.5R_F^H) = 0.25\{Var(R^F) + Var(R_F^H) + 2Cov(R^F, R_F^H)\}. \quad (5)$$

³

This simplification is without loss of generality. We want to focus on the effect of correlation between the equity markets and the currency market on the total variance of an international portfolio.

Our main interest lies on the difference between (5) and (6). If (5) is less than (6), even though s/he holds an identical portfolio, the home country investor holds a comparative advantage in risk reduction via international diversification. The next proposition establishes this comparative advantage in risk reduction as a function of the correlation between stock market returns and the foreign exchange returns.

Proposition (Comparative Advantage in Risk Reduction)

$$Var(R_H^G) - Var(R_F^G) = Cov(R^G, E^F) = -Cov(R^G, E^H) \tag{6}$$

$$Var(R_F^G) - Var(R_H^G) = Cov(R^G, E^H) = -Cov(R^G, E^F), \tag{7}$$

where $R^G \equiv R^H + R^F$.

(Proof in Appendix 1)

Notice that if Eq. (6) is negative, the home country investor holds a comparative advantage in reducing risks by combining stocks from the two countries. This happens when the value of the foreign currency is negatively related to the ‘world’ stock market returns. Intuitively, this should be the case, since when the home investor realizes a positive return from the stock portfolio, s/he loses on the foreign exchange, reducing the total gains from the foreign stock when it is converted into the home currency. On the contrary, the foreign investor faces exactly the opposite: with the appreciation of the foreign currency, s/he gains more when the home stock is sold and exchanged into the foreign currency. By the same token, when the ‘world’ stock market goes down, home investor can make up the losses via an appreciation of the foreign currency, while the foreign investor suffers more with a lower value of the home currency. Therefore, the correlation between the equity markets and the currency market renders the home and the foreign investors asymmetric risk reduction opportunities through international portfolio diversification.

I.2 Measure of Comparative Advantage in Risk Reduction

In this section, we develop a measure of comparative advantage in risk reduction. This parameter will then be estimated by running a simple linear regression. The measure we use is,

$$\beta_H = \frac{Var(R_H^G) - Var(R_F^G)}{Var(R^G)} = \frac{Cov(R^G, E^F)}{Var(R^G)} \quad (8)$$

Statistically, this parameter is nothing but the slope coefficient of the following linear regression model.

$$E_t^F = \alpha + \beta_H R_t^G + u_t \quad (9)$$

Heuristically, β_H measures the degree of comparative advantage in risk reduction from the home country investor's perspectives. For example, if R^G increases by 1%, the variance of total returns – sum of the returns from stocks and currency – to home country investors will be higher than that to foreign country investors by β_H % of the variance of R^G . Accordingly, if β_H is *positive*, the equally weighted international portfolio using stocks from the two countries provides a *higher* return variance to the *home* investors than to the foreign investors. Therefore, a *positive* β_H implies that the home country investors do *not* hold the comparative advantage in risk reduction. In this case, the foreign investors do. In addition, a larger β_H implies that there is a larger degree of asymmetry in risk reduction from combining stocks of the two countries.

Since the value of foreign currency expressed in home currency is the inverse of the value of home currency expressed in foreign currency, home country investors perceives the opposite risk reduction effects to the effects perceived by foreign country investors. This observation is formalized in the following corollary of the proposition. From Eq.'s (6), (7) and (8),

Corollary: (Asymmetric Comparative Advantage in Risk Reduction)

$$\beta_F = -\beta_H \quad (10)$$

This corollary implies that whenever the currency market adds risks to home country investors by β_H % of the variance of R^G , it will reduce the risks to foreign country investors by the same amount. Therefore, if we add all the estimated β 's for all countries, it will sum to 0.

II. Data

For the empirical analysis, we use weekly stock market and exchange rate data over 04/1996 to 06/2001 period for 31 countries: 9 developed countries and 22 emerging markets.⁴ First, 16 developed countries are chosen from the table in ‘Economic and Financial Indicators’, in the April 13th 2002 issue of ‘Economist’. However, since the period under consideration includes the fixed exchange rate regime effectuated by the introduction of Euro, we drop six countries that adopted Euro.⁵ This exclusion is necessary since we want to analyze the interaction between stock markets and the currency market for pairs of countries. If the exchange rate between the countries is fixed, the case becomes a non-issue. We include Germany as a representative of the European Monetary Union (EU) countries that adopted Euro, since she has the largest market capitalization among them. Second, the emerging markets are selected from the countries that are included in the MSCI EMF index as of 04/2002. A total of 24 countries are selected this way. Argentina and Pakistan, however, were under fixed exchange rate regime at least a part of the sample period. For the same reason as the six EU nations are excluded, these countries are excluded from the sample.

In the statistical model presented in the previous section, we assumed that there is only one stock for each country. We take the stock indices in the empirical analysis as representatives of those stocks. As a result, we analyze the risk reduction effects of international portfolio of equally weighted stock indices. The data on stock market indices and exchange rates are obtained from ‘Datastream’. All the exchange rates are first collected in units of U.S. dollar, and then whenever necessary, cross-rates are evaluated. Table 1 shows the currencies and the stock market indices that are used in the paper. In order to fit the data with the statistical model presented in the previous section, we take log returns of stock indices and exchange rates. For Germany, the exchange rates on Deutsch Mark are obtained until Dec 31, 1998. From then on, the rates on Euro are taken.

Insert Table 1 approximately here.

⁴ The total number of observations is 273.

⁵ The countries that are excluded are Austria, Belgium, France, Italy, Netherlands and Spain.

III. Empirical Analysis

III.1 Stock Market Correlations

In this subsection, we provide summary statistics in terms of some basic correlations. First, we show the correlation among the stock indices without considering the exchange rates. Table 2 shows the results. The numbers are the average of the 30 correlations between the indicated country's stock index and the other 30 stock indices. The first column lists the average correlation for the entire sample period, the second column, for the first half of the sample period, the third column, for the second half,⁶ and the last column, the increase of the average correlation from the first half to the second

Most of the individual averages are positive at 1% significance level. The exceptions are China and Morocco. Chinese stock market is on average negatively correlated with the other stock markets over the entire period, even though the negative correlation became weaker for the second half of the sample period. Morocco on the other hand saw her average correlation turn negative for the second part, making the overall average insignificant. German market overall has the highest correlation. We conjecture that this is partly due to the fact that German market has the highest ratio of foreign stocks listed in her stock exchange.⁷ As it can be seen, the correlation overall increased over the sample period, suggesting the on-

6

The column, 'Overall', represents the correlation over the entire sample period, 04/1996 ~ 06/2001 for 273 weekly returns; the column, '1st-half', the period, 04/1996 ~ 06/1998 for 117 weekly returns; the column, '2nd-half', 07/1998 ~ 06/2001 for 156 weekly returns

7

As of 1998, a total of 2,784 foreign companies were listed in German stock exchange. This is about 80% of the total listings, 3,525 companies. Compare this with the NYSE. In NYSE 391 out of 2,669 companies were foreign, which represents about 15%. (Source: Exhibit 8.10, p.193 from *International Financial Management* by Eun and Resnick, 2001. The exhibit in turn quotes Table 1.1, p.68 and Table 1.2, p.69 from *FIBV Annual Report and Statistics*, 1998)

going integration of international equity markets. Also, from the second section of the table, we find that the developed market average is larger than the emerging market average for all the periods considered. This implies that the markets are more integrated with the developed markets.

Insert Table 2 approximately here.

In the previous section, we showed that the investor from a country whose currency value is positively related to the 'sum' of the two stock returns holds a comparative advantage in risk reduction via international portfolio diversification. This positive correlation is more likely to be warranted if the local currency value is positively correlated with the stock market. Now, we investigate the correlation between the stock index and the local currency, and the results are shown in Table 3. As in Table 2, the correlations for the entire period, the first half of the sample period, for the second half, and the increase from the first half to the second are presented. The first section shows the correlation for each country, while the second section shows the summary statistics of these correlations. The value of local currency is expressed in US dollars. For the U.S., we use the exchange rate between British Pound and U.S. dollar to evaluate the value of a dollar. Overall, we find that the stock market returns are positively correlated with the currency market. In addition, the average correlation increased from the first half of the sample period to the second. However, if we separate the emerging markets' correlations from the developed markets', we find clear difference. The results indicate that the positive correlation is conspicuous only for the emerging markets. The emerging markets that do not exhibit positive correlation are only Russia, Morocco and Malaysia. For the developed markets, however, the equity and the currency markets are in general negatively correlated. One of the interesting cases is the U.S. The U.S. saw her correlation plunge by -0.9865 from 0.6560 to -0.3304 . The figure, 0.6560 is the highest for the first period, while -0.3304 is the lowest for the second period only next to Russia.

Insert Table 3 approximately here.

III.2 Estimation of the Measure of Comparative Advantage in Risk Reduction

Now, the estimation of the measure of comparative advantage in risk reduction, β_H , is in order. We estimate this parameter by running a regression on Eq. (9), $E_t^F = \alpha + \beta_H R_t^G + u_t$. Notice that for each country, there are 30 foreign countries, implying 930 pairs in all. First, we select the home country. Then, this country is paired up with each foreign country for 30 times. For a pair of home and foreign country, we generate a sum of weekly log returns on stock indices. This time series will serve as the data for R^G . The variable, E^F , is taken by the log return series of the foreign currency measured in units of the home currency. Table 4 shows results of Indonesia from the emerging markets and Swiss from the developed markets. The results for all 31 countries are provided in Appendix 2. We choose these two countries as a showcase since the empirical results from these two countries seem to reflect most strongly what we believe to be the pattern of risk reduction via international diversification: emerging markets tend to hold comparative advantage in risk reduction over developed countries.

Insert Table 4 approximately here.

Indonesia, which is classified as an emerging market owns comparative advantage over all the countries except Turkey. With Turkey, however, β_H is not statistically significant. On the contrary, Swiss, which is a developed market does not own the advantage for most of the countries. The exceptions are over Malaysia and Russia. The second section of the table provides summary statistics of the individual. In order to see the overall picture of each country's comparative advantage, we present in Table 5 the summary statistics of β_H 's.

Insert Table 5 approximately here.

In the first column of the table, we list the average of β_H 's with all the countries in the sample. In the second column, we list the average of β_H 's with only the emerging markets, and third column, with only the developed markets. The last column, 'Emg. –

Dev.’ provides the difference between the averages in the previous two columns: i.e. ‘the average β_H with the emerging markets – the average β_H with the developed markets’.

First, out of the 15 emerging markets that have significant average β_H , eight countries have negative β_H . These are Indonesia, Korea, Philippines, Mexico, Turkey, South Africa, Thailand, and Poland in the decreasing order of comparative advantage. Their β_H ’s range from – 0.1438 for Indonesia to – 0.0286 for Poland. The other emerging markets that are at comparative disadvantage are Malaysia, Russia, Morocco, Egypt, Czech, China and Hungary in the decreasing order of comparative disadvantage. In this case, their β_H ’s range from 0.1411 for Malaysia to 0.0178 for Hungary. If we separate the emerging markets and the developed markets, and recalculate the averages with these two groups of countries, we find some differences. With the emerging markets, there are only 7 countries with negative β_H out of 16 countries that show significance. With the developed markets, on the other hand, we find 13 countries with negative β_H out of 15 countries that show significance. This result suggests that more emerging markets hold comparative advantage when they form a portfolio with developed markets than with other emerging markets.

These findings with the case of emerging markets are reversed with the developed markets. First of all, out of 6 countries that show significant β_H , all but one, Australia, have positive β_H . In other words, five countries, Swiss, Denmark, the UK, Germany and Japan, in the decreasing order of comparative disadvantage, are at comparative disadvantage overall. If we group the countries by emerging and developed markets, unlike the case of emerging markets, when we evaluate the average with the emerging markets, all five countries that show significant β_H have positive β_H . When we take the average with the other developed markets, only three out of six countries that have significant β_H have positive β_H . In the case of developed markets, more companies find themselves at a comparative disadvantage in risk reduction when they form a portfolio with emerging markets than with the developed markets.

This asymmetry in risk reduction effects of international diversification is strongly supported by the t -tests shown in the last column of the table. For each country, the difference between the average with emerging markets and that with developed markets are evaluated. Then we conduct one-tail t -

tests to see whether the two averages are equal. For all countries except Malaysia, we find the average with the emerging markets larger than that with the developed markets. For twenty countries including Malaysia rejects the null hypothesis that the averages are the same against a one-tail alternative. This again implies that for most of the countries, the risk reduction effect of international diversification is larger when they combine their domestic stock with the stocks from the emerging markets than from the developed markets.

IV. Conclusion

In this paper, we argue that when the currency market is correlated with the equity markets, international portfolio diversification will bring about asymmetric risk reduction effects to investors from different countries. In fact, when the value of home currency is positively correlated with sum of returns from two equity markets, the investors from home country will hold a comparative advantage in risk reduction through international diversification, while the investors from the foreign country are at comparative disadvantage. We developed a measure of this comparative advantage in risk reduction, and estimate with pairs from 31 countries: 22 emerging and 9 developed. The main findings are (i) investors from most of the emerging markets hold comparative advantage in risk reduction when they form international portfolio with stocks from developed countries, (ii) investors from most of the developed markets are at comparative disadvantage in risk reduction when they form international portfolio with stocks from emerging markets, and (iii) the risk reduction effect of international diversification is larger when they combine their domestic stock with the stocks from the emerging markets than with the stocks from the developed markets.

This paper does not intend to explain the reasons for the apparent asymmetry in risk reduction effects of international diversification. We conjecture that the size of currency market may play a role. Whenever a foreigner buys and sells stocks of a country, s/he has to go through the currency market. Note that the emerging countries have relatively smaller currency market than the developed countries. Therefore, when international investors enter in the currency market, their demand and supply may have stronger price impact in the emerging markets than in the developed markets. This will tend to generate a higher correlation between equity markets and the currency market for the emerging

g markets. If this happens, the measure of comparative advantage in risk reduction, β_H , becomes negative for the emerging markets, rendering them a comparative advantage. We leave this part for future research.

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Table 1: Currencies and Stock Market Indices

Countries	Currency	Symbol	Stock Index
Panel A: Emerging Markets			
Brazil	Real	BRL	Bovespa
Chile	Peso	CLP	IGPA
China	Yuan Renminbi	CNY	DS MKT
Colombia	Peso	COP	DS MKT
Czech Republic	Koruna	CZK	DS MKT
Egypt	Pound	EGP	CMA
Hungary	Forint	HUF	DS MKT
India	Rupee	INR	BSE National
Indonesia	Rupiah	IDR	DS MKT
Israel	New Shekel	ILS	TA-100
Korea	Won	KRW	KOSPI 200
Malaysia	Ringgit	MYR	KLSE Composite
Mexico	Peso	MXN	BOLSA
Morocco	Dirham	MAD	IGBC
Peru	Nuevo Sol	PEN	Lima General
Philippines	Peso	PHP	PSE Composite
Poland	Zloty	PLN	WIG
Russia	Rouble	RUB	AKM Composite
South Africa	Rand	ZAR	DS MKT
Thailand	Baht	THB	DS MKT
Turkey	Lira	TRL	DS MKT
Venezuela	Bolivar	VEB	DS MKT
Panel B: Developed Countries			
Australia	Dollar	AUD	ASX ALL ORDINARIES
Canada	Dollar	CAD	S&P/TSX COMPOSITE INDEX
Denmark	Krone	DKK	COPENHAGEN KFX
Germany	Mark/Euro	-	DAX 30
Japan	Yen	JPY	TOPIX
Sweden	Krona	SEK	AFFARSVARLDEN GENERAL INDEX
Swiss	Franc	CHF	SWISS MARKET
United Kingdom	Pound	GBP	FTSE 100
USA	Dollar	USD	S&P500

This table provides the list of currencies and stock market indices for the countries that are selected for the empirical analysis. As a stock market index, 'DS MKT' means the market index provided by 'Datastream'. Germany had two currencies over the sample period.

Table 2: Average Correlation Coefficients Among Stock Market Indices

Country	Overall	1st-half	2nd-half	2nd – 1st
Brazil	0.3266	0.3299	0.3272	-0.0027
Chile	0.3116	0.2732	0.3395	0.0662
China	-0.0318***	-0.0778***	0.0005**	0.0784
Colombia	0.1411	0.1700	0.1269	-0.0431
Czech	0.2677	0.2025	0.2971	0.0946
Egypt	0.1085	0.0720	0.1476	0.0756
Hungary	0.3495	0.3121	0.3726	0.0605
India	0.1619	0.1813	0.1610	-0.0203
Indonesia	0.2187	0.2041	0.2331	0.0289
Israel	0.2733	0.2607	0.2809	0.0202
Korea	0.2274	0.1864	0.2670	0.0806
Malaysia	0.2063	0.2010	0.2217	0.0207
Mexico	0.3461	0.3275	0.3574	0.0299
Morocco	-0.0090**	0.0317*	-0.0399***	-0.0715
Peru	0.2747	0.2405	0.2934	0.0529
Philippines	0.2626	0.2698	0.2666	-0.0033
Poland	0.3170	0.2616	0.3492	0.0876
Russia	0.2222	0.1915	0.2437	0.0522
S. Africa	0.3725	0.3061	0.4048	0.0987
Thailand	0.2413	0.2088	0.2820	0.0732
Turkey	0.2131	0.1413	0.2485	0.1072
Venezuela	0.2072	0.2348	0.1966	-0.0382
Australia	0.3281	0.2922	0.3521	0.0599
Canada	0.3423	0.3243	0.3565	0.0322
Denmark	0.2544	0.2217	0.2714	0.0497
Germany	0.3795	0.3260	0.4063	0.0802
Japan	0.2035	0.1515	0.2374	0.0858
Sweden	0.3767	0.3616	0.3884	0.0269
Swiss	0.3138	0.3059	0.3208	0.0149
UK	0.3475	0.3137	0.3659	0.0522
USA	0.3560	0.3170	0.3742	0.0572

Overall (31 countries)				
Average	0.2552	0.2304	0.2726	0.0422
<i>t</i> -Stat	13.5938	13.0083	38.3417	14.3896
<i>p</i> -value	0.0000	0.0000	0.0000	0.0000
Emerging Markets (22 countries)				
Average	0.2276	0.2095	0.2444	0.0386
<i>t</i> -Stat	9.9148	9.5783	9.9888	3.4893
<i>p</i> -value	0.0000	0.0000	0.0000	0.0041
Developed Markets (9 countries)				
Average	0.3224	0.2904	0.3414	0.0510
<i>t</i> -Stat	15.6277	12.7934	17.4195	6.1332
<i>p</i> -value	0.0000	0.0000	0.0000	0.0000
Developed Markets – Emerging Markets				
<i>Difference</i>	0.0948	0.0809*	0.0970*	0.0124**
<i>p</i> -value	0.0085	0.0125	0.0101	0.2442

This table shows the correlation among international stock markets without considering the exchange rates. In the first section of the table, each number represents the average of correlations between the indicated countries stock market with 30 other markets. All averages except for the countries with *'s reject the null hypothesis against the alternative hypothesis that the average is positive at 1% significance level. The average with '*' indicates that the same hypothesis is rejected at 5% significance level. For the averages with '**', the null hypothesis is not rejected. The averages with '***' means that the null hypothesis is rejected at 1% significance level against the negative alternative. The column, 'Overall', represents the correlation over the entire sample period, 04/1996 ~ 06/2001 for 273 weekly returns; the column, '1st-half', the period, 04/1996 ~ 06/1998 for 117 weekly returns; the column, '2nd-half', 07/1998 ~ 06/2001 for 156 weekly returns; and the last column, '2nd – 1st', the increase of the correlation over the two sub-periods.

The second section of this table shows the summary statistics of the average correlations. The first set of the averages is the average of correlations of all the countries in the sample. The second set of averages is the average of correlations of only the emerging markets, and third set, of only the developed markets. The rows '*t*-Stat' and '*p*-value' perform one-tail test whether the average is significantly greater than zero. The row, '*Difference*' shows the difference between the developed market average and the emerging market average, i.e. 'the average correlations of the developed markets – the average correlations of the emerging markets'. The row '*p*-value' conducts a one-tail test whether the two averages are significantly different. The symbol, '*', indicates that the same hypothesis is rejected at 5% significance level, and the symbol, '**', indicates that the null hypothesis is not rejected. The figure without *'s means that the null hypothesis

esis is rejected at 1% significance level.

Table 3: Correlation Between Stock Market ant Domestic Currency

Country	Overall	1st-half	2nd-half	2nd – 1st
Brazil	0.0503	0.1598	0.0564	-0.1034
Chile	0.1302	0.1932	0.1159	-0.0774
China	0.0912	0.1056	-0.0065	-0.1121
Colombia	0.0870	0.0202	0.1108	0.0905
Czech	0.0305	0.0768	0.0104	-0.0664
Egypt	0.0529	-0.0397	0.0833	0.1230
Hungary	0.0001	-0.1497	0.0694	0.2191
India	0.1906	0.2115	0.2424	0.0309
Indonesia	0.1852	0.1525	0.2872	0.1346
Israel	0.1961	0.0064	0.2996	0.2932
Korea	0.4142	0.4780	0.4450	-0.0331
Malaysia	-0.0071	0.2072	-0.0980	-0.3053
Mexico	0.4063	0.4173	0.4051	-0.0122
Morocco	-0.0519	-0.2019	0.0153	0.2172
Peru	0.1057	0.0328	0.1420	0.1092
Philippines	0.3932	0.4502	0.3758	-0.0743
Poland	0.2475	0.0838	0.3185	0.2347
Russia	-0.3331	-0.1884	-0.3983	-0.2099
S. Africa	0.3353	0.2428	0.3638	0.1210
Thailand	0.2379	0.1628	0.4637	0.3009
Turkey	0.1996	0.0423	0.2161	0.1737
Venezuela	0.2930	0.2296	0.3420	0.1124
Australia	0.1326	0.1614	0.1191	-0.0424
Canada	0.2821	0.2760	0.2894	0.0133
Denmark	-0.2733	-0.4015	-0.2234	0.1781
Germany	-0.0160	-0.4395	0.0730	0.5125
Japan	0.0413	0.2575	-0.0774	-0.3349
Sweden	0.0311	-0.1213	0.0773	0.1986
Swiss	-0.2829	-0.3355	-0.2560	0.0795
UK	-0.1997	-0.2645	-0.1762	0.0884
USA	-0.2926	0.6560	-0.3304	-0.9865

Overall (31 countries)				
Average	0.0864***	0.0801***	0.1082***	0.0282*
<i>t</i> -Stat	6.3668	4.7057	7.1426	1.6435
<i>p</i> -value	0.0000	0.0000	0.0000	0.0554
Emerging Markets (22 countries)				
Average	0.1479***	0.1224***	0.1754***	0.0530*
<i>t</i> -Stat	3.8868	3.3094	3.8852	1.4954
<i>p</i> -value	0.0004	0.0031	0.0004	0.0748
Developed Markets (9 countries)				
Average	-0.0642	-0.0235	-0.0561	-0.0326
<i>t</i> -Stat	-0.8761	-0.1756	-0.7665	-0.2183
<i>p</i> -value	0.2032	0.4325	0.2327	0.4163
Developed Markets – Emerging Markets				
<i>Difference</i>	0.2121***	0.1459*	0.2315***	0.0856
<i>p</i> -value	0.0034	0.0781	0.0042	0.2072

This table shows the correlation between stock market return and the value of domestic currency. In the first section of the table, the column, ‘Overall’, lists the correlation over the entire sample period, 04/1996 ~ 06/2001 for 273 weekly returns; the column, ‘1st-half’, the period, 04/1996 ~ 06/1998 for 117 weekly returns; the column, ‘2nd-half’, 07/1998 ~ 06/2001 for 156 weekly returns; and the last column, ‘2nd – 1st’, the increase of the correlation over the two sub-periods.

The second section of the table shows the summary statistics for the individual correlations. The first set of the averages is the average of correlations of all the countries in the sample. The second set of averages is the average of correlations of only the emerging markets, and third set, of only the developed markets. The rows ‘*t*-Stat’ and ‘*p*-value’ perform one-tail test whether the average is significantly greater than (or less than, depending on the sign of the average) zero. The row, ‘*Difference*’ shows the difference between the emerging market average and the developed market average, i.e. ‘the average correlations of the emerging markets – the average correlations of the developed markets’. The row ‘*p*-value’ conducts a one-tail test whether the two averages are significantly different. The symbol, ‘***’, signifies that the null hypothesis is rejected at 1% significance level, while the symbols, ‘**’ and ‘*’, at 5% and 10% respectively.

Table 4: Estimation of the Measure of Comparative Advantage in Risk Reduction

Country	β_H	Std. Error	<i>t</i> -Stat.	<i>p</i> -value	β_H	Std. Error	<i>t</i> -Stat.	<i>p</i> -value
Brazil	0.1311***	0.0466	-2.8149	0.0052	0.0885***	0.0227	3.9002	0.0001
Chile	0.1829***	0.0572	-3.1982	0.0015	0.1437***	0.0221	6.5024	0.0000
China	-0.1294**	0.0558	-2.3167	0.0213	0.0305*	0.0166	1.8322	0.0680
Colombia	0.1737***	0.0581	-2.9879	0.0031	0.1519***	0.0266	5.7219	0.0000
Czech	0.1739***	0.0575	-3.0243	0.0027	0.0693***	0.0167	4.1442	0.0000
Egypt	0.1708***	0.0627	-2.7255	0.0068	0.0957***	0.0224	4.2826	0.0000
Hungary	0.1278***	0.0476	-2.6821	0.0078	0.0516***	0.0085	6.0997	0.0000
India	-0.1254**	0.0515	-2.4345	0.0156	0.0491***	0.0164	2.9861	0.0031
Indonesia		home			0.1797***	0.0569	3.1565	0.0018
Israel	0.1602***	0.0572	-2.8016	0.0055	0.1033***	0.0187	5.5351	0.0000
Korea	-0.0080	0.0378	-0.2101	0.8337	0.1816***	0.0269	6.7519	0.0000
Malaysia	-0.0703	0.0717	-0.9803	0.3278	0.1185***	0.0345	-3.4341	0.0007
Mexico	0.1462***	0.0498	-2.9354	0.0036	0.1607***	0.0189	8.5250	0.0000
Morocco	0.2022***	0.0674	-2.9980	0.0030	0.0652***	0.0161	4.0564	0.0001
Peru	0.1715***	0.0573	-2.9919	0.0030	0.1073***	0.0217	4.9357	0.0000
Philippines	0.1448***	0.0422	-3.4326	0.0007	0.1525***	0.0232	6.5627	0.0000
Poland	-0.1213**	0.0498	-2.4358	0.0155	0.1069***	0.0131	8.1625	0.0000
Russia	0.1768***	0.0432	-4.0910	0.0001	0.0858***	0.0275	-3.1154	0.0020
South Africa	0.1521***	0.0523	-2.9097	0.0039	0.1505***	0.0191	7.8724	0.0000
Thailand	0.1032***	0.0358	-2.8863	0.0042	0.0994***	0.0212	4.6838	0.0000
Turkey	0.0013	0.0464	0.0270	0.9785	0.1065***	0.0277	3.8430	0.0002
Venezuela	0.1780***	0.0465	-3.8298	0.0002	0.0558***	0.0134	4.1710	0.0000
Australia	-0.1241**	0.0613	-2.0241	0.0439	0.1664***	0.0269	6.1825	0.0000
Canada	0.1594***	0.0573	-2.7819	0.0058	0.1151***	0.0192	5.9984	0.0000

	-							
Denmark	0.1756***	0.0619	-2.8395	0.0049	0.0206**	0.0082	2.5183	0.0124
Germany	-0.1394**	0.0578	-2.4112	0.0166	0.0749**	0.0301	2.4863	0.0135
Japan	-0.1214**	0.0577	-2.1045	0.0363	0.0870***	0.0275	3.1653	0.0017
	-				0.0778 **			
Sweden	0.1597***	0.0573	-2.7857	0.0057	*	0.0122	6.3814	0.0000
	-							
Swiss	0.1797***	0.0569	-3.1565	0.0018		home		
	-							
UK	0.2136***	0.0588	-3.6355	0.0003	0.0363**	0.0166	2.1923	0.0292
	-							
USA	0.1930***	0.0575	-3.3592	0.0009	0.0839***	0.0173	4.8414	0.0000

	Indonesia	Swiss
Overall (30 countries)		
Average	-0.1438 ***	0.0869 ***
<i>t</i> -Stat	-15.7794	6.8741
<i>p</i> -value	0.0000	0.0000
With the Emerging Markets		
Average	-0.1356 ***	0.0884 ***
<i>t</i> -Stat	-11.5968	5.3585
<i>p</i> -value	0.0000	0.0000
With the Developed Markets		
Average	-0.1629 ***	0.0828 ***
<i>t</i> -Stat	-14.8304	5.2024
<i>p</i> -value	0.0000	0.0006
Emerging Market – Developed Markets (One-tail Test)		
<i>Difference</i>	0.0273 *	0.0057
<i>p</i> -value	0.0835	0.4222

The first section of this table provides the pairwise regression results of Eq. (9), $E_t^F = \alpha + \beta_H R_t^G + u_t$, for Indonesia and Swiss. The first 22 countries are emerging markets, while the last 9, developed markets. The weekly log returns on stock indices and currency returns are used for the period, 04/1996 ~ 06/2001. R_t^G is the sum of log return on home and foreign stock indices and E_t^F is the log returns of foreign currency in units of the home currency. The country identified as ‘home’ serves as the home country in the estimation. Only the measure for comparative advantage in risk reduction, β_H , is reported. The standard errors, under ‘Std. Error’, are corrected for heteroskedasticity and autocorrelation. The columns ‘*t*-Stat’ and ‘*p*-value’ performs a two-tail test that β_H is zero. The symbol, ‘***’, signifies that the null hypothesis that β_H is equal to zero is rejected at 1% significance level, while the symbols, ‘**’ and ‘*’, at 5% and 10% respectively.

The second section of this table shows the summary statistics for the individual β_H ’s. The first set of the averages is the average of β_H ’s with all the countries in the sample. The second set of averages is the average of β_H ’s with only the emerging markets, and third set, with only the developed markets. The rows ‘*t*-Stat’ and ‘*p*-value’ perform one-tail test whether the average is significantly greater than (or less than depending on the sign of the average) zero. The row, ‘*Difference*’ shows the difference between the emerging market average and the developed market average, i.e. ‘the average β_H with the emerging markets – the average β_H with the developed markets’. The row ‘*p*-value’ conducts a one-tail test whether the two averages are significantly different. The symbol, ‘***’, signifies that the null hypothesis is rejected at 1% significance level, while the symbols, ‘**’ and ‘*’, at 5% and 10% respectively.

Table 5: Summary Statistics of β_H 's

This table shows the summary statistics of average β_H 's for each country. The first column lists the average of the β_H 's with all the countries in the sample. The second column lists the average of β_H 's with only the emerging markets, and third column, with only the developed markets. The last column, 'Emg. – Dev.' provides the difference between the averages in the previous two columns: i.e. 'the average β_H with the emerging markets – the average β_H with the developed markets'. We conduct two-tail tests for the average β_H 's, and one-tail tests for the difference. The last three rows provide figures for the grand averages. The average of 'Overall average' has to be zero by construction, so we do not undertake statistical tests. For the other grand averages we conduct two-tail tests. The symbol, '***', signifies that the null hypothesis is rejected at 1% significance level, while the symbols, '**' and '*', at 5% and 10% respectively.

Countries	Avg. with Emg. Mkts			Emg. – Dev.
	Overall average	.	Avg. with Dev. Mkts.	
Brazil	-0.0119	-0.0006	-0.0382***	0.0376*
Chile	-0.0099	0.0100	-0.0564***	0.0664**
China	0.0202**	0.0315***	-0.0059	0.0374**
Colombia	-0.0090	0.0155	-0.0660***	0.0815***
Czech	0.0219**	0.0320**	-0.0016	0.0336*
Egypt	0.0277**	0.0377**	-0.0125	0.0502**
Hungary	0.0178**	0.0240**	0.0032	0.0209
India	0.0106	0.0195*	-0.0103	0.0299*
Indonesia	-0.1438***	-0.1356***	-0.1629***	0.0273*
Israel	-0.0126	0.0018	-0.0462***	0.0480*
Korea	-0.1299***	-0.1203***	-0.1523***	0.0319*
Malaysia	0.1411***	0.1232***	0.1827***	-0.0595*
Mexico	-0.0666***	-0.0519***	-0.1011***	0.0492*
Morocco	0.0532***	0.0684***	0.0177	0.0507**
Peru	0.0090	0.0241*	-0.0262	0.0503**
Philippines	-0.0793***	-0.0623***	-0.1189***	0.0566**
Poland	-0.0286***	-0.0192	-0.0506***	0.0315*
Russia	0.1192***	0.1198***	0.1179***	0.0019
South Africa	-0.0486***	-0.0371**	-0.0756***	0.0385
Thailand	-0.0473***	-0.0408***	-0.0624***	0.0216
Turkey	-0.0631***	-0.0548***	-0.0825***	0.0277**
Venezuela	0.0041	0.0151	-0.0215**	0.0366**
Australia	-0.0222*	-0.0018	-0.0785***	0.0767***
Canada	-0.0160	-0.0039	-0.0493**	0.0453
Denmark	0.0693***	0.0743***	0.0555***	0.0189
Germany	0.0210*	0.0293**	-0.0017	0.0310
Japan	0.0193*	0.0309**	-0.0126	0.0434**
Sweden	0.0050	0.0143	-0.0207*	0.0350
Swiss	0.0869***	0.0884***	0.0828***	0.0057
UK	0.0550***	0.0609***	0.0385**	0.0224
USA	0.0127	0.0224	-0.0141	0.0364
average	0.0000	0.0102	-0.0248**	0.0350***

<i>t</i> -stat.	<i>n.a.</i>	0.9386	-1.8611	7.5842
<i>p</i> -value	<i>n.a.</i>	0.1777	0.0363	0.0000

Appendix 1: Proof of Proposition

Before we proceed with the proof, a number of observations are in order. First, since the value of country i 's currency expressed in units of country j 's currency is the inverse of the value of country j 's currency expressed in units of country i 's currency, the following has to be the case.

Observation 1

$$E^H = -E^F \quad (\text{A1})$$

Also, the covariance between two equity markets when the returns are measured in one country's currency is decomposed into two covariances.

Observation 2

$$Cov(R^H, R_H^F) = Cov(R^H, R^F) + Cov(R^H, E^F) \quad (\text{A2})$$

$$Cov(R^F, R_F^H) = Cov(R^F, R^H) + Cov(R^F, E^H) \quad (\text{A3})$$

The next observation breaks down the variance of foreign country equity return measured in home country currency, and the variance of home country equity return measured in foreign currency.

Observation 3

$$Var(R_H^F) = Var(R^F) + Var(E^F) + 2Cov(R^F, E^F) \quad (\text{A4})$$

$$Var(R_F^H) = Var(R^H) + Var(E^H) + 2Cov(R^H, E^H) \quad (\text{A5})$$

From Observation 1, we can also see that

Observation 4

$$Var(E^F) = Var(-E^H) = Var(E^H) \quad (\text{A6})$$

This is true since the currency returns are log returns.

Now from Eq.'s (4), (A2) and (A4), the variance of the total return from the equally weighted international portfolio held by home investors is expressed as follows.

$$\begin{aligned}
\text{Var}(R_H^G) &= 0.25\{\text{Var}(R^H) + \text{Var}(R_H^F) + 2\text{Cov}(R^H, R_H^F)\} \\
&= 0.25\{\text{Var}(R^H) + \text{Var}(R^F) + \text{Var}(E^F) + 2\text{Cov}(R^F, E^F) + 2\text{Cov}(R^H, R_H^F)\} \\
&= 0.25\{\text{Var}(R^H) + \text{Var}(R^F) + \text{Var}(E^F) + 2\text{Cov}(R^F, E^F) + 2\text{Cov}(R^H, R^F) + 2\text{Cov}(R^H, E^F)\}
\end{aligned} \tag{A7}$$

Similarly, from the foreign investors perspectives, the equally weighted international portfolio will have the following return variance.

$$\begin{aligned}
\text{Var}(R_F^G) &= 0.25\{\text{Var}(R^F) + \text{Var}(R_F^H) + 2\text{Cov}(R^F, R_F^H)\} \\
&= 0.25\{\text{Var}(R^F) + \text{Var}(R^H) + \text{Var}(E^H) + 2\text{Cov}(R^H, E^H) + 2\text{Cov}(R^F, R_F^H)\} \\
&= 0.25\{\text{Var}(R^F) + \text{Var}(R^H) + \text{Var}(E^H) + 2\text{Cov}(R^H, E^H) + 2\text{Cov}(R^F, R^H) + 2\text{Cov}(R^F, E^H)\}
\end{aligned} \tag{A8}$$

Next, in order to draw Eq. (6), subtract (A8) from (A7). Use (A6) and (A1)

$$\begin{aligned}
\text{Var}(R_H^G) - \text{Var}(R_F^G) &= 0.5\{\text{Cov}(R^F, E^F) + \text{Cov}(R^H, E^F) - \text{Cov}(R^H, E^H) - \text{Cov}(R^F, E^H)\} \\
&= 0.5\{\text{Cov}(R^F, E^F) + \text{Cov}(R^H, E^F) + \text{Cov}(R^H, E^F) + \text{Cov}(R^F, E^F)\} \\
&= \text{Cov}(R^F, E^F) + \text{Cov}(R^H, E^F) \\
&= \text{Cov}(R^G, E^F) \\
&= -\text{Cov}(R^G, E^H)
\end{aligned} \tag{A9}$$

Eq. (7) can be derived in the same way.

Q.E.D.

Appendix 2: Pair-wise Regression Results

Country	β_H	Std. Error	t -Stat.	p -value	β_H	Std. Error	t -Stat.	p -value
Brazil		home			-0.0031	0.0197	-0.1556	0.8765
Chile	0.0031	0.0197	0.1556	0.8765		home		
China	-0.0076	0.0212	-0.3590	0.7198	-0.0092	0.0102	-0.9048	0.3664
Colombia	-0.0185	0.0226	-0.8174	0.4144	0.0039	0.0201	0.1924	0.8475
Czech	-0.0461*	0.0238	-1.9363	0.0539	-0.0442*	0.0250	-1.7661	0.0785
Egypt	0.0021	0.0239	0.0871	0.9307	-0.0245	0.0163	-1.5042	0.1337
Hungary	-0.0325*	0.0177	-1.8321	0.0680	-0.0290**	0.0136	-2.1226	0.0347
India	-0.0129	0.0192	-0.6718	0.5023	-0.0157	0.0105	-1.4982	0.1352
Indonesia	0.1311***	0.0466	2.8149	0.0052	0.1829***	0.0572	3.1982	0.0015
Israel	-0.0199	0.0200	-0.9966	0.3199	0.0119	0.0150	0.7913	0.4294
Korea	0.1035***	0.0245	4.2178	0.0000	0.1519***	0.0255	5.9482	0.0000
	-				-			
Malaysia	0.1932***	0.0331	-5.8464	0.0000	0.1514***	0.0414	-3.6613	0.0003
Mexico	0.0526***	0.0165	3.1947	0.0016	0.0665***	0.0136	4.8901	0.0000
	-				-			
Morocco	-0.0470*	0.0261	-1.8001	0.0730	0.0951***	0.0263	-3.6197	0.0004
Peru	-0.0102	0.0192	-0.5287	0.5974	-0.0122	0.0128	-0.9493	0.3433
Philippines	0.0479**	0.0218	2.1937	0.0291	0.0940***	0.0206	4.5670	0.0000
Poland	0.0345*	0.0184	1.8754	0.0618	0.0312**	0.0150	2.0839	0.0381
	-				-			
Russia	0.0791***	0.0244	-3.2475	0.0013	0.1269***	0.0252	-5.0400	0.0000
South Africa	0.0317	0.0204	1.5560	0.1209	0.0585***	0.0187	3.1260	0.0020
Thailand	0.0351*	0.0210	1.6713	0.0958	0.0536***	0.0192	2.7871	0.0057
Turkey	0.0263	0.0254	1.0349	0.3016	0.0665**	0.0290	2.2943	0.0225
Venezuela	-0.0135	0.0163	-0.8285	0.4081	0.0003	0.0085	0.0336	0.9732
Australia	0.0037	0.0246	0.1506	0.8804	0.0209	0.0288	0.7274	0.4676
Canada	-0.0003	0.0203	-0.0167	0.9867	0.0093	0.0156	0.5934	0.5534
	-				-			
Denmark	0.0723***	0.0238	-3.0361	0.0026	0.1254***	0.0230	-5.4518	0.0000
Germany	-0.0645**	0.0280	-2.3047	0.0219	-0.0561	0.0351	-1.5970	0.1114
Japan	-0.0206	0.0252	-0.8179	0.4141	-0.0578*	0.0299	-1.9363	0.0539
Sweden	-0.0271	0.0220	-1.2272	0.2208	-0.0259	0.0201	-1.2881	0.1988
	-				-			
Swiss	0.0885***	0.0227	-3.9002	0.0001	0.1437***	0.0221	-6.5024	0.0000
	-				-			
UK	-0.0513**	0.0224	-2.2948	0.0225	0.0943***	0.0202	-4.6644	0.0000
	-				-			
USA	-0.0226	0.0199	-1.1340	0.2578	0.0348***	0.0116	-2.9882	0.0031

	Brazil	Chile
Overall (30 countries)		
Average	-0.0119	-0.0099
<i>t</i> -Stat	-1.0646	-0.6699
<i>p</i> -value	0.1479	0.2541
With the Emerging Markets		
Average	-0.0006	0.0100
<i>t</i> -Stat	-0.0419	0.5650
<i>p</i> -value	0.4835	0.2892
With the Developed Markets		
Average	-0.0382 ***	-0.0564 ***
<i>t</i> -Stat	-3.3272	-2.8257
<i>p</i> -value	0.0052	0.0111
Emerging Market – Developed Markets (One-tail Test)		
<i>Difference</i>	0.0376 *	0.0664 **
<i>p</i> -value	0.0590	0.0171

This table provides the pair-wise regression results of Eq. (9), $E_t^f = \alpha + \beta_H R_t^G + u_t$, for all the countries. There are two sections in the tables for each country. The first section shows the individual estimated β_H . The first 22 countries are emerging markets, while the last 9, developed markets. The weekly log returns on stock indices and currency returns are used for the period, 04/1996 ~ 06/2001. R^G is the sum of log return on home and foreign stock indices and E^f is the log returns of foreign currency in units of the home currency. The country identified as ‘**home**’ serves as the home country in the estimation. Only the measure for comparative advantage in risk reduction, β_H , is reported. The standard errors, under ‘Std. Error’, are corrected for heteroskedasticity and autocorrelation. The columns ‘*t*-Stat’ and ‘*p*-value’ performs a two-tail test that β_H is zero. The symbol, ‘***’, signifies that the null hypothesis that β_H is equal to zero is rejected at 1% significance level, while the symbols, ‘**’ and ‘*’, at 5% and 10% respectively.

The second section of this table shows the summary statistics for the individual β_H ’s. The first set of the averages is the average of β_H ’s with all the countries in the sample. The second set of averages is the average of β_H ’s with only the emerging markets, and a third set, with only the developed markets. The rows ‘*t*-Stat’ and ‘*p*-value’ perform one-tail test whether the average is significantly greater than (or less than depending on the sign of the average) zero. The row, ‘*Difference*’ shows the difference between the emerging market average and the developed market average, i.e. ‘the average β_H with the emerging markets – the average β_H with the developed markets’. The row ‘*p*-value’ conducts a one-tail test whether the two averages are significantly different. The symbol, ‘***’, signifies that the null hypothesis is rejected at 1% significance level, while the symbols, ‘**’ and ‘*’, at 5% and 10% respectively.

Country	β_H	Std. Error	<i>t</i> -Stat.	<i>p</i> -value	β_H	Std. Error	<i>t</i> -Stat.	<i>p</i> -value
Brazil	0.0076	0.0212	0.3590	0.7198	0.0185	0.0226	0.8174	0.4144
Chile	0.0092	0.0102	0.9048	0.3664	-0.0039	0.0201	-0.1924	0.8475
China		home			0.0013	0.0143	0.0890	0.9292
Colombia	-0.0013	0.0143	-0.0890	0.9292		home		
Czech	0.0074	0.0194	0.3781	0.7056	-0.0415	0.0289	-1.4327	0.1531
Egypt	0.0058	0.0055	1.0393	0.2996	-0.0050	0.0199	-0.2526	0.8008
Hungary	0.0052	0.0108	0.4782	0.6329	-0.0363**	0.0171	-2.1257	0.0344
India	0.0122**	0.0048	2.5324	0.0119	-0.0029	0.0140	-0.2075	0.8358
Indonesia	0.1294**	0.0558	2.3167	0.0213	0.1737***	0.0581	2.9879	0.0031
Israel	0.0232**	0.0100	2.3315	0.0205	0.0096	0.0184	0.5244	0.6004
Korea	0.1354***	0.0237	5.7183	0.0000	0.1807***	0.0270	6.7038	0.0000
Malaysia	0.0285	0.0290	0.9823	0.3268	-			
					0.1060***	0.0393	-2.6980	0.0074
					0.0763			
Mexico	0.0533***	0.0131	4.0791	0.0001	***	0.0164	4.6417	0.0000
Morocco	0.0076	0.0122	0.6258	0.5320	-0.0644**	0.0293	-2.1991	0.0287
Peru	0.0060	0.0074	0.8130	0.4169	-0.0073	0.0171	-0.4253	0.6709
Philippines	0.0908***	0.0187	4.8421	0.0000	0.0890***	0.0234	3.8114	0.0002
Poland	0.0364***	0.0128	2.8313	0.0050	0.0110	0.0193	0.5712	0.5684
Russia	0.1130***	0.0243	-4.6466	0.0000	-			
					0.1013***	0.0241	-4.2013	0.0000
South Africa	0.0621***	0.0158	3.9265	0.0001	0.0298	0.0242	1.2339	0.2183
Thailand	0.0618***	0.0191	3.2420	0.0013	0.0516**	0.0219	2.3550	0.0192
Turkey	0.0755***	0.0275	2.7463	0.0064	0.0509*	0.0294	1.7350	0.0839
Venezuela	0.0177***	0.0042	4.2483	0.0000	0.0007	0.0117	0.0624	0.9503
Australia	0.0098	0.0203	0.4847	0.6283	-0.0056	0.0321	-0.1732	0.8626
Canada	0.0123	0.0085	1.4563	0.1465	0.0083	0.0192	0.4310	0.6668
Denmark	-0.0273	0.0167	-1.6370	0.1028	-			
					0.1165***	0.0283	-4.1213	0.0001
Germany	0.0059	0.0296	0.2006	0.8412	-0.0790**	0.0374	-2.1137	0.0355
Japan	-0.0074	0.0218	-0.3404	0.7338	-0.0638*	0.0334	-1.9111	0.0570
Sweden	0.0171	0.0154	1.1075	0.2691	-0.0572**	0.0244	-2.3468	0.0197
Swiss	-0.0305*	0.0166	-1.8322	0.0680	-			
					0.1519***	0.0266	-5.7219	0.0000
UK	-0.0330**	0.0136	-2.4238	0.0160	-			
					0.0894***	0.0233	-3.8343	0.0002
USA	-0.0001	0.0002	-0.6461	0.5188	-0.0389**	0.0168	-2.3230	0.0209

	China	Columbia
Overall (30 countries)		
Average	0.0202 ***	-0.0090
<i>t</i> -Stat	2.2703	-0.6323
<i>p</i> -value	0.0154	0.2661
With the Emerging Markets		
Average	0.0315 ***	0.0155
<i>t</i> -Stat	2.7493	0.9686
<i>p</i> -value	0.0062	0.1722
With the Developed Markets		
Average	-0.0059	-0.0660
<i>t</i> -Stat	-0.8526	-3.6756
<i>p</i> -value	0.2093	0.0031 ***
Emerging Market – Developed Markets (One-tail Test)		
<i>Difference</i>	0.0374 **	0.0815 ***
<i>p</i> -value	0.0244	0.0026

Country	β_H	Std. Error	<i>t</i> -Stat.	<i>p</i> -value	β_H	Std. Error	<i>t</i> -Stat.	<i>p</i> -value
Brazil	0.0461*	0.0238	1.9363	0.0539	-0.0021	0.0239	-0.0871	0.9307
Chile	0.0442*	0.0250	1.7661	0.0785	0.0245	0.0163	1.5042	0.1337
China	-0.0074	0.0194	-0.3781	0.7056	-0.0058	0.0055	-1.0393	0.2996
Colombia	0.0415	0.0289	1.4327	0.1531	0.0050	0.0199	0.2526	0.8008
Czech		home			0.0184	0.0248	0.7435	0.4578
Egypt	-0.0184	0.0248	-0.7435	0.4578		home		
Hungary	0.0090	0.0100	0.8955	0.3713	0.0023	0.0132	0.1778	0.8590
India	-0.0005	0.0180	-0.0250	0.9801	0.0101	0.0079	1.2800	0.2017
Indonesia	0.1739***	0.0575	3.0243	0.0027	0.1708***	0.0627	2.7255	0.0068
Israel	0.0323	0.0215	1.5064	0.1331	0.0282**	0.0134	2.1017	0.0365
Korea	0.1433***	0.0271	5.2919	0.0000	0.1682***	0.0266	6.3133	0.0000
Malaysia	-0.0793**	0.0390	-2.0312	0.0432	-0.0289	0.0404	-0.7138	0.4760
Mexico	0.0918***	0.0201	4.5578	0.0000	0.0951***	0.0151	6.2997	0.0000
Morocco	-0.0328	0.0214	-1.5341	0.1262	-0.0224	0.0210	-1.0642	0.2882
Peru	0.0221	0.0242	0.9129	0.3621	-0.0034	0.0127	-0.2659	0.7905
Philippines	0.0948***	0.0243	3.8968	0.0001	0.1284***	0.0221	5.8033	0.0000
Poland	0.0403***	0.0132	3.0521	0.0025	0.0550***	0.0151	3.6401	0.0003
	-				-			
Russia	0.1176***	0.0274	-4.2860	0.0000	0.1446***	0.0256	-5.6468	0.0000
					0.1092			
South Africa	0.0525**	0.0213	2.4659	0.0143	***	0.0207	5.2847	0.0000
Thailand	0.0534**	0.0208	2.5616	0.0110	0.0766***	0.0217	3.5269	0.0005
Turkey	0.0849***	0.0273	3.1143	0.0020	0.0879***	0.0294	2.9880	0.0031
Venezuela	-0.0015	0.0156	-0.0930	0.9260	0.0193***	0.0066	2.9362	0.0036
Australia	0.0513*	0.0289	1.7777	0.0766	0.0577*	0.0315	1.8321	0.0680
Canada	0.0290	0.0219	1.3259	0.1860	0.0518***	0.0134	3.8627	0.0001
Denmark	-0.0339**	0.0170	-1.9912	0.0475	-0.0854	0.1828	-0.4672	0.6408
Germany	0.0185	0.0334	0.5537	0.5802	0.0063	0.0564	0.2874	0.7740
Japan	-0.0133	0.0288	-0.4611	0.6451	-0.0135	0.0312	-0.4343	0.6644
Sweden	0.0267	0.0168	1.5883	0.1134	0.0178	0.0202	0.8797	0.3798
	-				-			
Swiss	0.0693***	0.0167	-4.1442	0.0000	0.0957***	0.0224	-4.2826	0.0000
UK	-0.0308	0.0224	-1.3756	0.1701	-0.0476**	0.0198	-2.4089	0.0167
USA	0.0075	0.0224	0.3343	0.7384	-0.0037	0.0075	-0.4973	0.6194

	Czech	Egypt
Overall (30 countries)		
Average	0.0219 **	0.0227 **
<i>t</i> -Stat	1.9283	1.7198
<i>p</i> -value	0.0318	0.0481
With the Emerging Markets		
Average	0.0320 **	0.0377 **
<i>t</i> -Stat	2.1867	2.3719
<i>p</i> -value	0.0204	0.0139
With the Developed Markets		
Average	-0.0016	-0.0125
<i>t</i> -Stat	-0.1186	-0.6459
<i>p</i> -value	0.4543	0.2682
Emerging Market – Developed Markets (One-tail Test)		
<i>Difference</i>	0.0336 *	0.0502 **
<i>p</i> -value	0.0862	0.0376

Country	β_H	Std. Error	<i>t</i> -Stat.	<i>p</i> -value	β_H	Std. Error	<i>t</i> -Stat.	<i>p</i> -value
Brazil	0.0325*	0.0177	1.8321	0.0680	0.0129	0.0192	0.6718	0.5023
Chile	0.0290**	0.0136	2.1226	0.0347	0.0157	0.0105	1.4982	0.1352
China	-0.0052	0.0108	-0.4782	0.6329	-0.0122**	0.0048	-2.5324	0.0119
Colombia	0.0363**	0.0171	2.1257	0.0344	0.0029	0.0140	0.2075	0.8358
Czech	-0.0090	0.0100	-0.8955	0.3713	0.0005	0.0180	0.0250	0.9801
Egypt	-0.0023	0.0132	-0.1778	0.8590	-0.0101	0.0079	-1.2800	0.2017
Hungary		home			-0.0020	0.0104	-0.1880	0.8511
India	0.0020	0.0104	0.1880	0.8511		home		
Indonesia	0.1278***	0.0476	2.6821	0.0078	0.1254**	0.0515	2.4345	0.0156
Israel	0.0313**	0.0121	2.5841	0.0103	0.0209	0.0100	2.0781	0.0386
Korea	0.1100***	0.0218	5.0543	0.0000	0.1137***	0.0209	5.4432	0.0000
	-							
Malaysia	0.1270***	0.0252	-5.0378	0.0000	-0.0638**	0.0295	-2.1595	0.0317
Mexico	0.0791***	0.0126	6.2705	0.0000	0.0502***	0.0119	4.2011	0.0000
	-							
Morocco	0.0229***	0.0077	-2.9812	0.0031	-0.0070	0.0134	-0.5241	0.6007
Peru	0.0175	0.0126	1.3869	0.1666	-0.0001	0.0086	-0.0115	0.9908
Philippines	0.0737***	0.0176	4.1825	0.0000	0.0781***	0.0176	4.4346	0.0000
Poland	0.0370***	0.0080	4.6290	0.0000	0.0344***	0.0122	2.8165	0.0052
	-							
Russia	0.0719***	0.0222	-3.2340	0.0014	0.1251***	0.0235	-5.3290	0.0000
South Africa	0.0615***	0.0128	4.7847	0.0000	0.0441***	0.0151	2.9250	0.0037
Thailand	0.0477***	0.0167	2.8593	0.0046	0.0475***	0.0175	2.7145	0.0071
Turkey	0.0489**	0.0223	2.1921	0.0292	0.0758***	0.0271	2.7964	0.0055
Venezuela	0.0087	0.0092	0.9382	0.3490	0.0086	0.0058	1.4817	0.1396
Australia	0.0402**	0.0165	2.4322	0.0157	0.0206	0.0186	1.1072	0.2692
Canada	0.0387***	0.0121	3.1931	0.0016	0.0102	0.0094	1.0832	0.2797
	-							
Denmark	0.0215***	0.0077	-2.7961	0.0055	-0.0286*	0.0158	-1.8183	0.0701
Germany	0.0048	0.0229	0.2081	0.8353	0.0136	0.0269	0.5047	0.6142
Japan	0.0052	0.0197	0.2662	0.7903	-0.0212	0.0211	-1.0032	0.3166
Sweden	0.0219**	0.0090	2.4252	0.0160	0.0110	0.0140	0.7899	0.4303
	-							
Swiss	0.0516***	0.0085	-6.0997	0.0000	0.0491***	0.0164	-2.9861	0.0031
UK	-0.0166	0.0115	-1.4365	0.1520	-0.0332**	0.0133	-2.5071	0.0128
	-							
USA	0.0075	0.0112	0.6676	0.5050	0.0162***	0.0056	-2.8784	0.0043

	Hungary	India
Overall (30 countries)		
Average	0.0178 **	0.0106
<i>t</i> -Stat	1.8944	1.1446
<i>p</i> -value	0.0341	0.1309
With the Emerging Markets		
Average	0.0240 **	0.0195 *
<i>t</i> -Stat	1.9422	1.6172
<i>p</i> -value	0.0332	0.0608
With the Developed Markets		
Average	0.0032	-0.0103
<i>t</i> -Stat	0.3037	-1.1773
<i>p</i> -value	0.3845	0.1365
Emerging Market – Developed Markets (One-tail Test)		
<i>Difference</i>	0.0209	0.0299 *
<i>p</i> -value	0.1543	0.0672

Country	β_H	Std. Error	<i>t</i> -Stat.	<i>p</i> -value	β_H	Std. Error	<i>t</i> -Stat.	<i>p</i> -value
Brazil	0.1311***	0.0466	-2.8149	0.0052	0.0199	0.0200	0.9966	0.3199
Chile	0.1829***	0.0572	-3.1982	0.0015	-0.0119	0.0150	-0.7913	0.4294
China	-0.1294**	0.0558	-2.3167	0.0213	-0.0232**	0.0100	-2.3315	0.0205
Colombia	0.1737***	0.0581	-2.9879	0.0031	-0.0096	0.0184	-0.5244	0.6004
Czech	0.1739***	0.0575	-3.0243	0.0027	-0.0323	0.0215	-1.5064	0.1331
Egypt	0.1708***	0.0627	-2.7255	0.0068	-0.0282**	0.0134	-2.1017	0.0365
Hungary	0.1278***	0.0476	-2.6821	0.0078	-0.0313**	0.0121	-2.5841	0.0103
India	-0.1254**	0.0515	-2.4345	0.0156	-0.0209**	0.0100	-2.0781	0.0386
Indonesia		home			0.1602***	0.0572	2.8016	0.0055
Israel	0.1602***	0.0572	-2.8016	0.0055		home		
Korea	-0.0080	0.0378	-0.2101	0.8337	0.1334***	0.0242	5.5134	0.0000
Malaysia	-0.0703	0.0717	-0.9803	0.3278	0.2293***	0.0336	-6.8242	0.0000
Mexico	0.1462***	0.0498	-2.9354	0.0036	0.0492***	0.0132	3.7295	0.0002
Morocco	0.2022***	0.0674	-2.9980	0.0030	0.0617***	0.0183	-3.3703	0.0009
Peru	0.1715***	0.0573	-2.9919	0.0030	-0.0241*	0.0123	-1.9559	0.0515
Philippines	0.1448***	0.0422	-3.4326	0.0007	0.0875***	0.0199	4.3961	0.0000
Poland	-0.1213**	0.0498	-2.4358	0.0155	0.0176	0.0141	1.2429	0.2150
Russia	0.1768***	0.0432	-4.0910	0.0001	0.1255***	0.0246	-5.0968	0.0000
South Africa	0.1521***	0.0523	-2.9097	0.0039	0.0398**	0.0176	2.2549	0.0249
Thailand	0.1032***	0.0358	-2.8863	0.0042	0.0684***	0.0199	3.4449	0.0007
Turkey	0.0013	0.0464	0.0270	0.9785	0.0576**	0.0273	2.1136	0.0355
Venezuela	0.1780***	0.0465	-3.8298	0.0002	0.0017	0.0089	0.1911	0.8486
Australia	-0.1241**	0.0613	-2.0241	0.0439	-0.0241	0.0236	-1.0189	0.3092
Canada	0.1594***	0.0573	-2.7819	0.0058	-0.0003	0.0120	-0.0243	0.9806
Denmark		0.0619	-2.8395	0.0049		0.0185	-4.3398	0.0000

	0.1756***				0.0804***			
Germany	-0.1394**	0.0578	-2.4112	0.0166	-0.0346	0.0280	-1.2357	0.2176
Japan	-0.1214**	0.0577	-2.1045	0.0363	-0.0462*	0.0263	-1.7576	0.0799
	-							
Sweden	0.1597***	0.0573	-2.7857	0.0057	-0.0208	0.0160	-1.2992	0.1950
	-							
Swiss	0.1797***	0.0569	-3.1565	0.0018	0.1033***	0.0187	-5.5351	0.0000
	-							
UK	0.2136***	0.0588	-3.6355	0.0003	0.0743***	0.0166	-4.4661	0.0000
	-							
USA	0.1930***	0.0575	-3.3592	0.0009	0.0321***	0.0098	-3.2645	0.0012

	Indonesia	Israel
Overall (30 countries)		
Average	-0.1438 ***	-0.0126
<i>t</i> -Stat	-15.7794	-0.9045
<i>p</i> -value	0.0000	0.1866
With the Emerging Markets		
Average	-0.1356 ***	0.0018
<i>t</i> -Stat	-11.5968	0.0973
<i>p</i> -value	0.0000	0.4617
With the Developed Markets		
Average	-0.1629 ***	-0.0462 ***
<i>t</i> -Stat	-14.8304	-3.9429
<i>p</i> -value	0.0000	0.0021
Emerging Market – Developed Markets (One-tail Test)		
<i>Difference</i>	0.0273 *	0.0480 *
<i>p</i> -value	0.0835	0.0550

Country	β_H	Std. Error	<i>t</i> -Stat.	<i>p</i> -value	β_H	Std. Error	<i>t</i> -Stat.	<i>p</i> -value
Brazil	0.1035***	0.0245	-4.2178	0.0000	0.1932***	0.0331	5.8464	0.0000
Chile	0.1519***	0.0255	-5.9482	0.0000	0.1514***	0.0414	3.6613	0.0003
China	0.1354***	0.0237	-5.7183	0.0000	-0.0285	0.0290	-0.9823	0.3268
Colombia	0.1807***	0.0270	-6.7038	0.0000	0.1060***	0.0393	2.6980	0.0074
Czech	0.1433***	0.0271	-5.2919	0.0000	0.0793**	0.0390	2.0312	0.0432
Egypt	0.1682***	0.0266	-6.3133	0.0000	0.0289	0.0404	0.7138	0.4760
Hungary	0.1100***	0.0218	-5.0543	0.0000	0.1270***	0.0252	5.0378	0.0000
India	0.1137***	0.0209	-5.4432	0.0000	0.0638**	0.0295	2.1595	0.0317
Indonesia	0.0080	0.0378	0.2101	0.8337	0.0703	0.0717	0.9803	0.3278
Israel	0.1334***	0.0242	-5.5134	0.0000	0.2293***	0.0336	6.8242	0.0000
Korea		home			0.2227***	0.0364	6.1216	0.0000
Malaysia	0.2227***	0.0364	-6.1216	0.0000		home		
Mexico	0.0844***	0.0234	-3.6135	0.0004	0.3237***	0.0302	10.7068	0.0000
Morocco	0.2038***	0.0290	-7.0313	0.0000	-0.0343	0.0423	-0.8105	0.4183
Peru	0.1633***	0.0250	-6.5307	0.0000	0.1207***	0.0387	3.1147	0.0020
Philippines	0.0653***	0.0207	-3.1571	0.0018	0.2030***	0.0382	5.3138	0.0000
Poland	0.0867***	0.0221	-3.9268	0.0001	0.1833***	0.0311	5.8966	0.0000
Russia	0.1561***	0.0257	-6.0782	0.0000	-0.0620*	0.0349	-1.7752	0.0770
South Africa	0.1116***	0.0247	-4.5209	0.0000	0.2615***	0.0360	7.2644	0.0000
Thailand	0.0556***	0.0180	-3.0953	0.0022	0.1115***	0.0316	3.5340	0.0005
Turkey	-0.0275	0.0289	-0.9491	0.3434	0.1350***	0.0340	3.9679	0.0001
Venezuela	0.1177***	0.0209	-5.6268	0.0000	0.1020***	0.0263	3.8727	0.0001
Australia	-	0.0262	-4.9849	0.0000	0.1078**	0.0470	2.2953	0.0225

	0.1304***							
	-							
Canada	0.1433***	0.0242	-5.9292	0.0000	0.2880***	0.0343	8.4053	0.0000
	-							
Denmark	0.1743***	0.0270	-6.4638	0.0000	0.0782**	0.0382	2.0465	0.0417
	-							
Germany	0.1443***	0.0303	-4.7666	0.0000	0.1970***	0.0439	4.4850	0.0000
	-							
Japan	0.1219***	0.0263	-4.6423	0.0000	0.0962**	0.0448	2.1460	0.0328
	-							
Sweden	0.1326***	0.0247	-5.3751	0.0000	0.2190***	0.0355	6.1740	0.0000
	-							
Swiss	0.1816***	0.0269	-6.7519	0.0000	0.1185***	0.0345	3.4341	0.0007
	-							
UK	0.1751***	0.0245	-7.1390	0.0000	0.1686***	0.0380	4.4338	0.0000
	-							
USA	0.1669***	0.0235	-7.0940	0.0000	0.3712***	0.0291	12.7413	0.0000

	Korea	Malaysia
Overall (30 countries)		
Average	-0.1299 ***	0.1411 ***
<i>t</i> -Stat	-13.8402	7.5297
<i>p</i> -value	0.0000	0.0000
With the Emerging Markets		
Average	-0.1203 ***	0.1232 ***
<i>t</i> -Stat	-9.7740	5.6977
<i>p</i> -value	0.0000	0.0000
With the Developed Markets		
Average	-0.1523 ***	0.1827 ***
<i>t</i> -Stat	-19.2277	5.2864
<i>p</i> -value	0.0000	0.0004
Emerging Market – Developed Markets (One-tail Test)		
<i>Difference</i>	0.0319 *	-0.0595 *
<i>p</i> -value	0.0571	0.0708

Country	β_H	Std. Error	<i>t</i> -Stat.	<i>p</i> -value	β_H	Std. Error	<i>t</i> -Stat.	<i>p</i> -value
Brazil	- 0.0526***	0.0165	-3.1947	0.0016	0.0470*	0.0261	1.8001	0.0730
Chile	- 0.0665***	0.0136	-4.8901	0.0000	0.0951***	0.0263	3.6197	0.0004
China	- 0.0533***	0.0131	-4.0791	0.0001	-0.0076	0.0122	-0.6258	0.5320
Colombia	- 0.0763***	0.0164	-4.6417	0.0000	0.0644**	0.0293	2.1991	0.0287
Czech	- 0.0918***	0.0201	-4.5578	0.0000	0.0328	0.0214	1.5341	0.1262
Egypt	- 0.0951***	0.0151	-6.2997	0.0000	0.0224	0.0210	1.0642	0.2882
Hungary	- 0.0791***	0.0126	-6.2705	0.0000	0.0229***	0.0077	2.9812	0.0031
India	- 0.0502***	0.0119	-4.2011	0.0000	0.0070	0.0134	0.5241	0.6007
Indonesia	- 0.1462***	0.0498	2.9354	0.0036	0.2022***	0.0674	2.9980	0.0030
Israel	- 0.0492***	0.0132	-3.7295	0.0002	0.0617***	0.0183	3.3703	0.0009
Korea	- 0.0844***	0.0234	3.6135	0.0004	0.2038	0.0746	-1.2565	0.2100
Malaysia	- 0.3237***	0.0302	-10.7068	0.0000	0.0343	0.0423	0.8105	0.4183
Mexico	- home				0.1301***	0.0204	6.3911	0.0000
Morocco	- 0.1301***	0.0204	-6.3911	0.0000	home			
Peru	- 0.0716***	0.0121	-5.8986	0.0000	0.0463**	0.0227	2.0428	0.0420
Philippines	- 0.0221	0.0191	1.1605	0.2469	0.1631***	0.0260	6.2757	0.0000
Poland	- -0.0240*	0.0131	-1.8361	0.0674	0.0827***	0.0143	5.7742	0.0000
Russia	- 0.1447***	0.0220	-6.5621	0.0000	- 0.1482***	0.0279	-5.3063	0.0000
South Africa	- -0.0195	0.0152	-1.2809	0.2013	0.1435 ***	0.0238	6.0200	0.0000
Thailand	- 0.0169	0.0185	0.9132	0.3619	0.0965***	0.0229	4.2150	0.0000
Turkey	- 0.0240	0.0262	0.9178	0.3595	0.1048***	0.0309	3.3868	0.0008
Venezuela	- 0.0549***	0.0093	-5.8820	0.0000	0.0309***	0.0113	2.7312	0.0067
Australia	- 0.0679***	0.0201	-3.3817	0.0008	0.0385	0.0396	0.9730	0.3314
Canada	- 0.0571***	0.0129	-4.4302	0.0000	0.0876***	0.0225	3.8900	0.0001
Denmark	- -	0.0187	-7.2597	0.0000	- -	0.0163	-3.8124	0.0002

	0.1360***				0.0623***			
	-							
Germany	0.1236***	0.0248	-4.9765	0.0000	0.0374	0.0434	0.8614	0.3898
	-							
Japan	0.0863***	0.0234	-3.6931	0.0003	0.0363	0.0342	1.0601	0.2901
	-							
Sweden	0.0716***	0.0160	-4.4908	0.0000	0.0512***	0.0177	2.8951	0.0041
	-							
Swiss	0.1607***	0.0189	-8.5250	0.0000	0.0652***	0.0161	-4.0564	0.0001
	-							
UK	0.1232***	0.0166	-7.4272	0.0000	-0.0135	0.0214	-0.6312	0.5284
	-							
USA	0.0831***	0.0114	-7.2879	0.0000	0.0494***	0.0183	2.6941	0.0075

	Mexico	Morocco
Overall (30 countries)		
Average	-0.0666 ***	0.0532 ***
<i>t</i> -Stat	-4.3733	3.8333
<i>p</i> -value	0.0001	0.0003
With the Emerging Markets		
Average	-0.0519 ***	0.0684 ***
<i>t</i> -Stat	-2.5799	3.9916
<i>p</i> -value	0.0089	0.0004
With the Developed Markets		
Average	-0.1011 ***	0.0177
<i>t</i> -Stat	-7.9975	0.9460
<i>p</i> -value	0.0000	0.1859
Emerging Market – Developed Markets (One-tail Test)		
<i>Difference</i>	0.0492 *	0.0507 **
<i>p</i> -value	0.0673	0.0444

Country	β_H	Std. Error	<i>t</i> -Stat.	<i>p</i> -value	β_H	Std. Error	<i>t</i> -Stat.	<i>p</i> -value
Brazil	0.0102	0.0192	0.5287	0.5974	-0.0479**	0.0218	-2.1937	0.0291
Chile	0.0122	0.0128	0.9493	0.3433	0.0940***	0.0206	-4.5670	0.0000
China	-0.0060	0.0074	-0.8130	0.4169	0.0908***	0.0187	-4.8421	0.0000
Colombia	0.0073	0.0171	0.4253	0.6709	0.0890***	0.0234	-3.8114	0.0002
Czech	-0.0221	0.0242	-0.9129	0.3621	0.0948***	0.0243	-3.8968	0.0001
Egypt	0.0034	0.0127	0.2659	0.7905	0.1284***	0.0221	-5.8033	0.0000
Hungary	-0.0175	0.0126	-1.3869	0.1666	0.0737***	0.0176	-4.1825	0.0000
India	0.0001	0.0086	0.0115	0.9908	0.0781***	0.0176	-4.4346	0.0000
Indonesia	0.1715***	0.0573	2.9919	0.0030	0.1448***	0.0422	3.4326	0.0007
Israel	0.0241*	0.0123	1.9559	0.0515	0.0875***	0.0199	-4.3961	0.0000
Korea	0.1633***	0.0250	6.5307	0.0000	0.0653 ***	0.0207	3.1571	0.0018
Malaysia	0.1207***	0.0387	-3.1147	0.0020	0.2030***	0.0382	-5.3138	0.0000
Mexico	0.0716***	0.0121	5.8986	0.0000	-0.0221	0.0191	-1.1605	0.2469
Morocco	-0.0463**	0.0227	-2.0428	0.0420	0.1631***	0.0260	-6.2757	0.0000
Peru		home			0.1045***	0.0212	-4.9252	0.0000
Philippines	0.1045***	0.0212	4.9252	0.0000		home		
Poland	0.0493***	0.0144	3.4187	0.0007	-0.0484**	0.0189	-2.5650	0.0109
Russia	0.1185***	0.0242	-4.8869	0.0000	0.1411***	0.0257	-5.4941	0.0000
South Africa	0.0733***	0.0179	4.0909	0.0001	-0.0311	0.0210	-1.4789	0.1403
Thailand	0.0736***	0.0204	3.6176	0.0004	0.0091	0.0140	0.6530	0.5143
Turkey	0.0692**	0.0279	2.4800	0.0137	0.0328	0.0282	1.1635	0.2457
Venezuela	0.0037	0.0069	0.5308	0.5960	0.0632***	0.0156	-4.0611	0.0001
Australia	0.0522**	0.0265	1.9711	0.0497	0.0798***	0.0248	-3.2179	0.0014
Canada	0.0427***	0.0129	3.3246	0.0010	0.1067***	0.0202	-5.2883	0.0000
Denmark	0.0903***	0.0235	-3.8381	0.0002	0.1591***	0.0248	-6.4166	0.0000

Germany	-0.0073	0.0341	-0.2125	0.8319	-	0.0934***	0.0301	-3.1057	0.0021
Japan	-0.0313	0.0287	-1.0915	0.2760	-	0.1033***	0.0253	-4.0861	0.0001
Sweden	-0.0137	0.0184	-0.7439	0.4576	-	0.0976***	0.0224	-4.3660	0.0000
Swiss	0.1073***	0.0217	-4.9357	0.0000	-	0.1525***	0.0232	-6.5627	0.0000
UK	0.0659***	0.0194	-3.3914	0.0008	-	0.1533***	0.0222	-6.9182	0.0000
USA	-0.0153*	0.0090	-1.6900	0.0922	-	0.1242***	0.0190	-6.5511	0.0000

	Peru	Philippines
Overall (30 countries)		
Average	0.0090	-0.0793 ***
<i>t</i> -Stat	0.6737	-5.9292
<i>p</i> -value	0.2529	0.0000
With the Emerging Markets		
Average	0.0241	-0.0623 ***
<i>t</i> -Stat	1.4866	-3.6379
<i>p</i> -value	0.0764 *	0.0008
With the Developed Markets		
Average	-0.0262	-0.1189 ***
<i>t</i> -Stat	-1.3602	-11.3789
<i>p</i> -value	0.1054	0.0000
Emerging Market – Developed Markets (One-tail Test)		
<i>Difference</i>	0.0503	0.0566 **
<i>p</i> -value	0.0393 **	0.0233

Country	β_H	Std. Error	<i>t</i> -Stat.	<i>p</i> -value	β_H	Std. Error	<i>t</i> -Stat.	<i>p</i> -value
Brazil	-0.0345*	0.0184	-1.8754	0.0618	0.0791***	0.0244	3.2475	0.0013
Chile	-0.0312**	0.0150	-2.0839	0.0381	0.1269***	0.0252	5.0400	0.0000
	-							
China	0.0364***	0.0128	-2.8313	0.0050	0.1130***	0.0243	4.6466	0.0000
Colombia	-0.0110	0.0193	-0.5712	0.5684	0.1013***	0.0241	4.2013	0.0000
	-							
Czech	0.0403***	0.0132	-3.0521	0.0025	0.1176***	0.0274	4.2860	0.0000
	-							
Egypt	0.0550***	0.0151	-3.6401	0.0003	0.1446***	0.0256	5.6468	0.0000
	-							
Hungary	0.0370***	0.0080	-4.6290	0.0000	0.0719***	0.0222	3.2340	0.0014
	-							
India	0.0344***	0.0122	-2.8165	0.0052	0.1251***	0.0235	5.3290	0.0000
Indonesia	0.1213**	0.0498	2.4358	0.0155	0.1768***	0.0432	4.0910	0.0001
Israel	-0.0176	0.0141	-1.2429	0.2150	0.1255***	0.0246	5.0968	0.0000
Korea	0.0867***	0.0221	3.9268	0.0001	0.1561***	0.0257	6.0782	0.0000
	-							
Malaysia	0.1833***	0.0311	-5.8966	0.0000	0.0620*	0.0349	1.7752	0.0770
Mexico	0.0240*	0.0131	1.8361	0.0674	0.1447***	0.0220	6.5621	0.0000
	-							
Morocco	0.0827***	0.0143	-5.7742	0.0000	0.1482***	0.0279	5.3063	0.0000
	-							
Peru	0.0493***	0.0144	-3.4187	0.0007	0.1185***	0.0242	4.8869	0.0000
Philippines	0.0484**	0.0189	2.5650	0.0109	0.1411***	0.0257	5.4941	0.0000
Poland		home			0.1221***	0.0227	5.3903	0.0000
	-							
Russia	0.1221***	0.0227	-5.3903	0.0000		home		
South Africa	0.0091	0.0141	0.6412	0.5219	0.1346***	0.0256	5.2637	0.0000
Thailand	0.0423**	0.0171	2.4730	0.0140	0.1141***	0.0249	4.5892	0.0000
Turkey	0.0332	0.0244	1.3647	0.1735	0.1002***	0.0257	3.8926	0.0001
	-							
Venezuela	0.0326***	0.0112	-2.9176	0.0038	0.0919***	0.0224	4.1017	0.0001
Australia	-0.0148	0.0189	-0.7822	0.4348	0.1656***	0.0277	5.9718	0.0000
Canada	-0.0147	0.0136	-1.0828	0.2799	0.1357***	0.0254	5.3454	0.0000
	-							
Denmark	0.0775***	0.0123	-6.2956	0.0000	0.1094***	0.0275	3.9811	0.0001
Germany	-0.0301	0.0250	-1.2042	0.2295	0.0828***	0.0290	2.8556	0.0046
	-							
Japan	0.0585***	0.0210	-2.7797	0.0058	0.1415***	0.0285	4.9577	0.0000
Sweden	-0.0228*	0.0123	-1.8631	0.0635	0.1150***	0.0269	4.2783	0.0000
	-							
Swiss	0.1069***	0.0131	-8.1625	0.0000	0.0858***	0.0275	3.1154	0.0020

UK	-	0.0740***	0.0143	-5.1848	0.0000	0.1110***	0.0264	4.2077	0.0000
USA	-	0.0562***	0.0132	-4.2546	0.0000	0.1142***	0.0254	4.5000	0.0000

	Poland	Russia
Overall (30 countries)		
Average	-0.0286 ***	0.1192 ***
<i>t</i> -Stat	-2.5598	23.3831
<i>p</i> -value	0.0080	0.0000
With the Emerging Markets		
Average	-0.0192	0.1198 ***
<i>t</i> -Stat	-1.3057	19.2374
<i>p</i> -value	0.1032	0.0000
With the Developed Markets		
Average	-0.0506 ***	0.1179 ***
<i>t</i> -Stat	-4.4437	12.6545
<i>p</i> -value	0.0011	0.0000
Emerging Market – Developed Markets (One-tail Test)		
<i>Difference</i>	0.0315 *	0.0019
<i>p</i> -value	0.0971	0.4333

Country	β_H	Std. Error	<i>t</i> -Stat.	<i>p</i> -value	β_H	Std. Error	<i>t</i> -Stat.	<i>p</i> -value
Brazil	-0.0317	0.0204	-1.5560	0.1209	-0.0351*	0.0210	-1.6713	0.0958
-	-	-	-	-	-	-	-	-
Chile	0.0585***	0.0187	-3.1260	0.0020	0.0536***	0.0192	-2.7871	0.0057
-	-	-	-	-	-	-	-	-
China	0.0621***	0.0158	-3.9265	0.0001	0.0618***	0.0191	-3.2420	0.0013
Colombia	-0.0298	0.0242	-1.2339	0.2183	-0.0516**	0.0219	-2.3550	0.0192
Czech	-0.0525**	0.0213	-2.4659	0.0143	-0.0534**	0.0208	-2.5616	0.0110
-	-	-	-	-	-	-	-	-
Egypt	0.1092***	0.0207	-5.2847	0.0000	0.0766***	0.0217	-3.5269	0.0005
-	-	-	-	-	-	-	-	-
Hungary	0.0615***	0.0128	-4.7847	0.0000	0.0477***	0.0167	-2.8593	0.0046
-	-	-	-	-	-	-	-	-
India	0.0441***	0.0151	-2.9250	0.0037	0.0475***	0.0175	-2.7145	0.0071
Indonesia	0.1521***	0.0523	2.9097	0.0039	0.1032***	0.0358	2.8863	0.0042
-	-	-	-	-	-	-	-	-
Israel	-0.0398**	0.0176	-2.2549	0.0249	0.0684***	0.0199	-3.4449	0.0007
Korea	0.1116***	0.0247	4.5209	0.0000	0.0556***	0.0180	3.0953	0.0022
-	-	-	-	-	-	-	-	-
Malaysia	0.2615***	0.0360	-7.2644	0.0000	0.1115***	0.0316	-3.5340	0.0005
Mexico	0.0195	0.0152	1.2809	0.2013	-0.0169	0.0185	-0.9132	0.3619
-	-	-	-	-	-	-	-	-
Morocco	0.1435***	0.0238	-6.0200	0.0000	0.0965***	0.0229	-4.2150	0.0000
-	-	-	-	-	-	-	-	-
Peru	0.0733***	0.0179	-4.0909	0.0001	0.0736***	0.0204	-3.6176	0.0004
Philippines	0.0311	0.0210	1.4789	0.1403	-0.0091	0.0140	-0.6530	0.5143
Poland	-0.0091	0.0141	-0.6412	0.5219	-0.0423**	0.0171	-2.4730	0.0140
-	-	-	-	-	-	-	-	-
Russia	0.1346***	0.0256	-5.2637	0.0000	0.1141***	0.0249	-4.5892	0.0000
South Africa		home			-0.0225	0.0188	-1.1966	0.2325
Thailand	0.0225	0.0188	1.1966	0.2325		home		
Turkey	0.0359	0.0271	1.3263	0.1859	0.0116	0.0257	0.4508	0.6525
-	-	-	-	-	-	-	-	-
Venezuela	0.0408***	0.0131	-3.1218	0.0020	0.0451***	0.0159	-2.8370	0.0049
Australia	0.0007***	0.0566	14.9300	0.0000	-0.0263	0.0217	-1.2112	0.2269
-	-	-	-	-	-	-	-	-
Canada	-0.0356**	0.0163	-2.1841	0.0298	0.0538***	0.0192	-2.7955	0.0056
-	-	-	-	-	-	-	-	-
Denmark	0.1165***	0.0212	-5.4922	0.0000	0.0902***	0.0218	-4.1310	0.0000
-	-	-	-	-	-	-	-	-
Germany	0.0795***	0.0299	-2.6603	0.0083	-0.0392	0.0269	-1.4562	0.1465
Japan	-0.0589**	0.0262	-2.2509	0.0252	-0.0414*	0.0226	-1.8295	0.0684
Sweden	-0.0393**	0.0175	-2.2465	0.0255	-	0.0204	-2.7418	0.0065

					0.0559***				
	-				-				
Swiss	0.1505***	0.0191	-7.8724	0.0000	0.0994***	0.0212	-4.6838	0.0000	
	-				-				
UK	0.1212***	0.0197	-6.1566	0.0000	0.0836***	0.0204	-4.1080	0.0001	
	-				-				
USA	0.0797***	0.0165	-4.8282	0.0000	0.0718***	0.0192	-3.7457	0.0002	

	South Africa	Thailand
Overall (30 countries)		
Average	-0.0486 ***	-0.0473 ***
<i>t</i> -Stat	-3.2988	-5.5836
<i>p</i> -value	0.0013	0.0000
With the Emerging Markets		
Average	-0.0371 **	-0.0408 ***
<i>t</i> -Stat	-1.9302	-3.6569
<i>p</i> -value	0.0339	0.0008
With the Developed Markets		
Average	-0.0756 ***	-0.0624 ***
<i>t</i> -Stat	-4.4584	-7.0046
<i>p</i> -value	0.0011	0.0001
Emerging Market – Developed Markets (One-tail Test)		
<i>Difference</i>	0.0385	0.0216
<i>p</i> -value	0.1150	0.1206

Country	β_H	Std. Error	<i>t</i> -Stat.	<i>p</i> -value	β_H	Std. Error	<i>t</i> -Stat.	<i>p</i> -value
Brazil	-0.0263	0.0254	-1.0349	0.3016	0.0135	0.0163	0.8285	0.4081
Chile	-0.0665**	0.0290	-2.2943	0.0225	-0.0003	0.0085	-0.0336	0.9732
	-				-			
China	0.0755***	0.0275	-2.7463	0.0064	0.0177***	0.0042	-4.2483	0.0000
Colombia	-0.0509*	0.0294	-1.7350	0.0839	-0.0007	0.0117	-0.0624	0.9503
	-							
Czech	0.0849***	0.0273	-3.1143	0.0020	0.0015	0.0156	0.0930	0.9260
	-				-			
Egypt	0.0879***	0.0294	-2.9880	0.0031	0.0193***	0.0066	-2.9362	0.0036
Hungary	-0.0489**	0.0223	-2.1921	0.0292	-0.0087	0.0092	-0.9382	0.3490
	-							
India	0.0758***	0.0271	-2.7964	0.0055	-0.0086	0.0058	-1.4817	0.1396
Indonesia	-0.0013	0.0464	-0.0270	0.9785	0.1780***	0.0465	3.8298	0.0002
Israel	-0.0576**	0.0273	-2.1136	0.0355	-0.0017	0.0089	-0.1911	0.8486
Korea	0.0275	0.0289	0.9491	0.3434	0.1177***	0.0209	5.6268	0.0000
	-				-			
Malaysia	0.1350***	0.0340	-3.9679	0.0001	0.1020***	0.0263	-3.8727	0.0001
Mexico	-0.0240	0.0262	-0.9178	0.3595	0.0549***	0.0093	5.8820	0.0000
	-				-			
Morocco	0.1048***	0.0309	-3.3868	0.0008	0.0309***	0.0113	-2.7312	0.0067
Peru	-0.0692**	0.0279	-2.4800	0.0137	-0.0037	0.0069	-0.5308	0.5960
Philippines	-0.0328	0.0282	-1.1635	0.2457	0.0632***	0.0156	4.0611	0.0001
Poland	-0.0332	0.0244	-1.3647	0.1735	0.0326***	0.0112	2.9176	0.0038
	-				-			
Russia	0.1002***	0.0257	-3.8926	0.0001	0.0919***	0.0224	-4.1017	0.0001
South Africa	-0.0359	0.0271	-1.3263	0.1859	0.0408***	0.0131	3.1218	0.0020
Thailand	-0.0116	0.0257	-0.4508	0.6525	0.0451***	0.0159	2.8370	0.0049
Turkey		home			0.0555**	0.0243	2.2867	0.0230
Venezuela	-0.0555**	0.0243	-2.2867	0.0230		home		
Australia	-0.0659**	0.0306	-2.1561	0.0320	0.0088	0.0164	0.5400	0.5896
Canada	-0.0661**	0.0284	-2.3301	0.0205	0.0102	0.0084	1.2169	0.2247
	-				-			
Denmark	0.0997***	0.0283	-3.5216	0.0005	0.0501***	0.0136	-3.6776	0.0003
	-							
Germany	0.0893***	0.0310	-2.8864	0.0042	-0.0297	0.0235	-1.2632	0.2076
Japan	-0.0778**	0.0301	-2.5850	0.0103	-0.0139	0.0187	-0.7442	0.4574
Sweden	-0.0654**	0.0263	-2.4850	0.0136	-0.0053	0.0129	-0.4098	0.6823
	-				-			
Swiss	0.1065***	0.0277	-3.8430	0.0002	0.0558***	0.0134	-4.1710	0.0000
	-				-			
UK	0.0866***	0.0286	-3.0286	0.0027	0.0394***	0.0111	-3.5390	0.0005
USA	-	0.0279	-3.0357	0.0026	-	0.0043	-4.2603	0.0000

|0.0848***

|0.0184***

	Turkey	Venezuela
Overall (30 countries)		
Average	-0.0631 ***	0.0041
<i>t</i> -Stat	-9.7165	0.4000
<i>p</i> -value	0.0000	0.3460
With the Emerging Markets		
Average	-0.0548 ***	0.0151
<i>t</i> -Stat	-6.6127	1.1201
<i>p</i> -value	0.0000	0.1380
With the Developed Markets		
Average	-0.0825 ***	-0.0215 **
<i>t</i> -Stat	-15.5440	-2.5260
<i>p</i> -value	0.0000	0.0177
Emerging Market – Developed Markets (One-tail Test)		
<i>Difference</i>	0.0277 **	0.0366 **
<i>p</i> -value	0.0225	0.0494

Country	β_H	Std. Error	<i>t</i> -Stat.	<i>p</i> -value	β_H	Std. Error	<i>t</i> -Stat.	<i>p</i> -value
Brazil	-0.0037	0.0246	-0.1506	0.8804	0.0003	0.0203	0.0167	0.9867
Chile	-0.0209	0.0288	-0.7274	0.4676	-0.0093	0.0156	-0.5934	0.5534
China	-0.0098	0.0203	-0.4847	0.6283	-0.0123	0.0085	-1.4563	0.1465
Colombia	0.0056	0.0321	0.1732	0.8626	-0.0083	0.0192	-0.4310	0.6668
Czech	-0.0513*	0.0289	-1.7777	0.0766	-0.0290	0.0219	-1.3259	0.1860
Egypt	-0.0577*	0.0315	-1.8321	0.0680	0.0518***	0.0134	-3.8627	0.0001
Hungary	-0.0402**	0.0165	-2.4322	0.0157	0.0387***	0.0121	-3.1931	0.0016
India	-0.0206	0.0187	-1.0643	0.2881	-0.0102	0.0094	-1.0832	0.2797
Indonesia	0.1241**	0.0613	2.0241	0.0439	0.1594***	0.0573	2.7819	0.0058
Israel	0.0241	0.0236	1.0189	0.3092	0.0003	0.0120	0.0243	0.9806
Korea	0.1304***	0.0262	4.9849	0.0000	0.1433***	0.0242	5.9292	0.0000
Malaysia	-0.1078**	0.0470	-2.2953	0.0225	0.2880***	0.0343	-8.4053	0.0000
Mexico	0.0679***	0.0201	3.3817	0.0008	0.0571***	0.0129	4.4302	0.0000
Morocco	-0.0385	0.0396	-0.9730	0.3314	0.0876***	0.0225	-3.8900	0.0001
Peru	-0.0522**	0.0265	-1.9711	0.0497	0.0427***	0.0129	-3.3246	0.0010
Philippines	0.0798***	0.0248	3.2179	0.0014	0.1067***	0.0202	5.2883	0.0000
Poland	0.0148	0.0189	0.7822	0.4348	0.0147	0.0136	1.0828	0.2799
Russia	0.1656***	0.0277	-5.9718	0.0000	0.1357***	0.0254	-5.3454	0.0000
South Africa	-0.0007	0.0253	-0.0271	0.9784	0.0356**	0.0163	2.1841	0.0298
Thailand	0.0263	0.0217	1.2112	0.2269	0.0538***	0.0192	2.7955	0.0056
Turkey	0.0659**	0.0306	2.1561	0.0320	0.0661**	0.0284	2.3301	0.0205
Venezuela	-0.0088	0.0164	-0.5400	0.5896	-0.0102	0.0084	-1.2169	0.2247
Australia		home			0.0264	0.0219	1.2057	0.2290
Canada	-0.0264	0.0219	-1.2057	0.2290		home		
Denmark	0.1102***	0.0286	-3.8517	0.0001	0.0985***	0.0191	-5.1700	0.0000
Germany	-0.0623	0.0396	-1.5743	0.1166	-0.0323	0.0299	-1.0794	0.2814
Japan	-0.0507	0.0325	-1.5604	0.1198	-0.0321	0.0260	-1.2311	0.2194
Sweden	-0.0309	0.0240	-1.2839	0.2003	-0.0177	0.0159	-1.1155	0.2656
Swiss	0.1664***	0.0269	-6.1825	0.0000	0.1151***	0.0192	-5.9984	0.0000
UK	0.1350***	0.0263	-5.1262	0.0000	0.0862***	0.0160	-5.3846	0.0000
USA	-0.0461*	0.0242	-1.9042	0.0579	0.0385***	0.0084	-4.5914	0.0000

	Australia	Canada
Overall (30 countries)		
Average	-0.0222 *	-0.0160
<i>t</i> -Stat	-1.6403	-1.0066
<i>p</i> -value	0.0559	0.1612
With the Emerging Markets		
Average	-0.0018	-0.0039
<i>t</i> -Stat	-0.1175	-0.1918
<i>p</i> -value	0.4538	0.4249
With the Developed Markets		
Average	-0.0785 ***	-0.0493 **
<i>t</i> -Stat	-4.2623	-2.9563
<i>p</i> -value	0.0019	0.0106
Emerging Market – Developed Markets (One-tail Test)		
<i>Difference</i>	0.0767 ***	0.0453
<i>p</i> -value	0.0042	0.1028

Country	β_H	Std. Error	<i>t</i> -Stat.	<i>p</i> -value	β_H	Std. Error	<i>t</i> -Stat.	<i>p</i> -value
Brazil	0.0723***	0.0238	3.0361	0.0026	0.0645**	0.0280	2.3047	0.0219
Chile	0.1254***	0.0230	5.4518	0.0000	0.0561	0.0351	1.5970	0.1114
China	0.0273	0.0167	1.6370	0.1028	-0.0059	0.0296	-0.2006	0.8412
Colombia	0.1165***	0.0283	4.1213	0.0001	0.0790**	0.0374	2.1137	0.0355
Czech	0.0339**	0.0170	1.9912	0.0475	-0.0185	0.0334	-0.5537	0.5802
Egypt	0.0854***	0.0226	3.3795	0.0008	-0.0063	0.0386	-0.4618	0.6446
Hungary	0.0215***	0.0077	2.7961	0.0055	-0.0048	0.0229	-0.2081	0.8353
India	0.0286*	0.0158	1.8183	0.0701	-0.0136	0.0269	-0.5047	0.6142
Indonesia	0.1756***	0.0619	2.8395	0.0049	0.1394**	0.0578	2.4112	0.0166
Israel	0.0804***	0.0185	4.3398	0.0000	0.0346	0.0280	1.2357	0.2176
Korea	0.1743***	0.0270	6.4638	0.0000	0.1443***	0.0303	4.7666	0.0000
	-				-			
Malaysia	-0.0782**	0.0382	-2.0465	0.0417	0.1970***	0.0439	-4.4850	0.0000
Mexico	0.1360***	0.0187	7.2597	0.0000	0.1236***	0.0248	4.9765	0.0000
Morocco	0.0623***	0.0163	3.8124	0.0002	-0.0374	0.0434	-0.8614	0.3898
Peru	0.0903***	0.0235	3.8381	0.0002	0.0073	0.0341	0.2125	0.8319
Philippines	0.1591***	0.0248	6.4166	0.0000	0.0934***	0.0301	3.1057	0.0021
Poland	0.0775***	0.0123	6.2956	0.0000	0.0301	0.0250	1.2042	0.2295
	-				-			
Russia	0.1094***	0.0275	3.9811	0.0001	0.0828***	0.0290	-2.8556	0.0046
South Africa	0.1165***	0.0212	-5.4922	0.0000	0.0795***	0.0299	2.6603	0.0083
Thailand	0.0902***	0.0218	-4.1310	0.0000	0.0392	0.0269	1.4562	0.1465
Turkey	0.0997***	0.0283	-3.5216	0.0005	0.0893***	0.0310	2.8864	0.0042
Venezuela	0.0501***	0.0136	-3.6776	0.0003	0.0297	0.0235	1.2632	0.2076
Australia	0.1102***	0.0286	-3.8517	0.0001	0.0623	0.0396	1.5743	0.1166
Canada	0.0985***	0.0191	-5.1700	0.0000	0.0323	0.0299	1.0794	0.2814
Denmark		home			-0.0458	0.0329	-1.3924	0.1650
Germany	0.0458	0.0329	-1.3924	0.1650		home		
Japan	0.0528*	0.0301	-1.7561	0.0802	0.0224	0.0367	0.6089	0.5431
Sweden	0.0497***	0.0103	-4.8327	0.0000	0.0100	0.0275	0.3631	0.7168
Swiss	-0.0206**	0.0082	2.5183	0.0124	-0.0749**	0.0301	-2.4863	0.0135
UK	0.0341**	0.0172	-1.9775	0.0490	-0.0263	0.0327	-0.8033	0.4225
USA	0.0733***	0.0185	3.9710	0.0001	0.0063	0.0296	0.2134	0.8311

	Denmark	Germany
Overall (30 countries)		
Average	0.0693 ***	0.0210 *
<i>t</i> -Stat	5.8303	1.5991
<i>p</i> -value	0.0000	0.0603
With the Emerging Markets		
Average	0.0743 ***	0.0293 **
<i>t</i> -Stat	4.8127	1.7347
<i>p</i> -value	0.0000	0.0487
With the Developed Markets		
Average	0.0555 ***	-0.0017
<i>t</i> -Stat	3.8633	-0.1087
<i>p</i> -value	0.0031	0.4582
Emerging Market – Developed Markets (One-tail Test)		
<i>Difference</i>	0.0189	0.0310
<i>p</i> -value	0.2427	0.1484

Country	β_H	Std. Error	<i>t</i> -Stat.	<i>p</i> -value	β_H	Std. Error	<i>t</i> -Stat.	<i>p</i> -value
Brazil	0.0206	0.0252	0.8179	0.4141	0.0271	0.0220	1.2272	0.2208
Chile	0.0578*	0.0299	1.9363	0.0539	0.0259	0.0201	1.2881	0.1988
China	0.0074	0.0218	0.3404	0.7338	-0.0171	0.0154	-1.1075	0.2691
Colombia	0.0638*	0.0334	1.9111	0.0570	0.0572**	0.0244	2.3468	0.0197
Czech	0.0133	0.0288	0.4611	0.6451	-0.0267	0.0168	-1.5883	0.1134
Egypt	0.0135	0.0312	0.4343	0.6644	-0.0178	0.0202	-0.8797	0.3798
Hungary	-0.0052	0.0197	-0.2662	0.7903	-0.0219**	0.0090	-2.4252	0.0160
India	0.0212	0.0211	1.0032	0.3166	-0.0110	0.0140	-0.7899	0.4303
Indonesia	0.1214**	0.0577	2.1045	0.0363	0.1597***	0.0573	2.7857	0.0057
Israel	0.0462*	0.0263	1.7576	0.0799	0.0208	0.0160	1.2992	0.1950
Korea	0.1219***	0.0263	4.6423	0.0000	0.1326***	0.0247	5.3751	0.0000
					-			
Malaysia	-0.0962**	0.0448	-2.1460	0.0328	0.2190***	0.0355	-6.1740	0.0000
Mexico	0.0863***	0.0234	3.6931	0.0003	0.0716***	0.0160	4.4908	0.0000
					-			
Morocco	-0.0363	0.0342	-1.0601	0.2901	0.0512***	0.0177	-2.8951	0.0041
Peru	0.0313	0.0287	1.0915	0.2760	0.0137	0.0184	0.7439	0.4576
Philippines	0.1033***	0.0253	4.0861	0.0001	0.0976***	0.0224	4.3660	0.0000
Poland	0.0585***	0.0210	2.7797	0.0058	0.0228*	0.0123	1.8631	0.0635
					-			
Russia	0.1415***	0.0285	-4.9577	0.0000	0.1150***	0.0269	-4.2783	0.0000
South Africa	0.0589**	0.0262	2.2509	0.0252	0.0393**	0.0175	2.2465	0.0255
Thailand	0.0414*	0.0226	1.8295	0.0684	0.0559***	0.0204	2.7418	0.0065
Turkey	0.0778**	0.0301	2.5850	0.0103	0.0654**	0.0263	2.4850	0.0136
Venezuela	0.0139	0.0187	0.7442	0.4574	0.0053	0.0129	0.4098	0.6823
Australia	0.0507	0.0325	1.5604	0.1198	0.0309	0.0240	1.2839	0.2003
Canada	0.0321	0.0260	1.2311	0.2194	0.0177	0.0159	1.1155	0.2656
					-			
Denmark	-0.0528*	0.0301	-1.7561	0.0802	0.0497***	0.0103	-4.8327	0.0000
Germany	-0.0224	0.0367	-0.6089	0.5431	-0.0100	0.0275	-0.3631	0.7168
Japan		home			-0.0253	0.0261	-0.9683	0.3338
Sweden	0.0253	0.0261	0.9683	0.3338		home		
					-			
Swiss	0.0870***	0.0275	-3.1653	0.0017	0.0778***	0.0122	-6.3814	0.0000
					-			
UK	-0.0532*	0.0292	-1.8257	0.0690	0.0420***	0.0147	-2.8514	0.0047
USA	0.0067	0.0259	0.2599	0.7951	-0.0090	0.0156	-0.5764	0.5648

	Japan	Sweden
Overall (30 countries)		
Average	0.0193 *	0.0050
<i>t</i> -Stat	1.6729	0.3743
<i>p</i> -value	0.0526	0.3554
With the Emerging Markets		
Average	0.0309 **	0.0143
<i>t</i> -Stat	2.2367	0.8226
<i>p</i> -value	0.0181	0.2100
With the Developed Markets		
Average	-0.0126	-0.0207 *
<i>t</i> -Stat	-0.7279	-1.6325
<i>p</i> -value	0.2452	0.0733
Emerging Market – Developed Markets (One-tail Test)		
<i>Difference</i>	0.0434 **	0.0350
<i>p</i> -value	0.0451	0.1226

Country	β_H	Std. Error	<i>t</i> -Stat.	<i>p</i> -value	β_H	Std. Error	<i>t</i> -Stat.	<i>p</i> -value
Brazil	0.0885***	0.0227	3.9002	0.0001	0.0513**	0.0224	2.2948	0.0225
Chile	0.1437***	0.0221	6.5024	0.0000	0.0943***	0.0202	4.6644	0.0000
China	0.0305*	0.0166	1.8322	0.0680	0.0330**	0.0136	2.4238	0.0160
Colombia	0.1519***	0.0266	5.7219	0.0000	0.0894***	0.0233	3.8343	0.0002
Czech	0.0693***	0.0167	4.1442	0.0000	0.0308	0.0224	1.3756	0.1701
Egypt	0.0957***	0.0224	4.2826	0.0000	0.0476**	0.0198	2.4089	0.0167
Hungary	0.0516***	0.0085	6.0997	0.0000	0.0166	0.0115	1.4365	0.1520
India	0.0491***	0.0164	2.9861	0.0031	0.0332**	0.0133	2.5071	0.0128
Indonesia	0.1797***	0.0569	3.1565	0.0018	0.2136***	0.0588	3.6355	0.0003
Israel	0.1033***	0.0187	5.5351	0.0000	0.0743***	0.0166	4.4661	0.0000
Korea	0.1816***	0.0269	6.7519	0.0000	0.1751***	0.0245	7.1390	0.0000
	-				-			
Malaysia	0.1185***	0.0345	-3.4341	0.0007	0.1686***	0.0380	-4.4338	0.0000
Mexico	0.1607***	0.0189	8.5250	0.0000	0.1232***	0.0166	7.4272	0.0000
Morocco	0.0652***	0.0161	4.0564	0.0001	0.0135	0.0214	0.6312	0.5284
Peru	0.1073***	0.0217	4.9357	0.0000	0.0659***	0.0194	3.3914	0.0008
Philippines	0.1525***	0.0232	6.5627	0.0000	0.1533***	0.0222	6.9182	0.0000
Poland	0.1069***	0.0131	8.1625	0.0000	0.0740***	0.0143	5.1848	0.0000
	-				-			
Russia	0.0858***	0.0275	-3.1154	0.0020	0.1110***	0.0264	-4.2077	0.0000
South Africa	0.1505***	0.0191	7.8724	0.0000	0.1212***	0.0197	6.1566	0.0000
Thailand	0.0994***	0.0212	4.6838	0.0000	0.0836***	0.0204	4.1080	0.0001
Turkey	0.1065***	0.0277	3.8430	0.0002	0.0866***	0.0286	3.0286	0.0027
Venezuela	0.0558***	0.0134	4.1710	0.0000	0.0394***	0.0111	3.5390	0.0005
Australia	0.1664***	0.0269	6.1825	0.0000	0.1350***	0.0263	5.1262	0.0000
Canada	0.1151***	0.0192	5.9984	0.0000	0.0862***	0.0160	5.3846	0.0000
Denmark	0.0206**	0.0082	2.5183	0.0124	-0.0341**	0.0172	-1.9775	0.0490
Germany	0.0749**	0.0301	2.4863	0.0135	0.0263	0.0327	0.8033	0.4225
Japan	0.0870***	0.0275	3.1653	0.0017	0.0532*	0.0292	1.8257	0.0690
	0.0778 **							
Sweden	*	0.0122	6.3814	0.0000	0.0420***	0.0147	2.8514	0.0047
Swiss		home			-0.0363**	0.0166	-2.1923	0.0292
UK	0.0363**	0.0166	2.1923	0.0292		home		
USA	0.0839***	0.0173	4.8414	0.0000	0.0359**	0.0143	2.5012	0.0130

	Swiss	UK
Overall (30 countries)		
Average	0.0869 ***	0.0550 ***
<i>t</i> -Stat	6.8741	3.8509
<i>p</i> -value	0.0000	0.0003
With the Emerging Markets		
Average	0.0884 ***	0.0609 ***
<i>t</i> -Stat	5.3585	3.3545
<i>p</i> -value	0.0000	0.0015
With the Developed Markets		
Average	0.0828 ***	0.0385 **
<i>t</i> -Stat	5.2024	1.9077
<i>p</i> -value	0.0006	0.0490
Emerging Market – Developed Markets (One-tail Test)		
<i>Difference</i>	0.0057	0.0224
<i>p</i> -value	0.4222	0.2449

Country	β_H	Std. Error	<i>t</i> -Stat.	<i>p</i> -value
Brazil	0.0226	0.0199	-1.1340	0.2578
Chile	0.0348***	0.0116	-2.9882	0.0031
China	0.0001	0.0002	-0.6461	0.5188
Colombia	0.0389**	0.0168	-2.3230	0.0209
Czech	-0.0075	0.0224	0.3343	0.7384
Egypt	0.0037	0.0075	-0.4973	0.6194
Hungary	-0.0075	0.0112	0.6676	0.5050
India	0.0162***	0.0056	-2.8784	0.0043
Indonesia	0.1930***	0.0575	-3.3592	0.0009
Israel	0.0321***	0.0098	-3.2645	0.0012
Korea	0.1669***	0.0235	-7.0940	0.0000
	-			
Malaysia	0.3712***	0.0291	12.7413	0.0000
Mexico	0.0831***	0.0114	-7.2879	0.0000
	-			
Morocco	0.0494***	0.0183	2.6941	0.0075
Peru	0.0153*	0.0090	-1.6900	0.0922
Philippines	0.1242***	0.0190	-6.5511	0.0000
Poland	0.0562***	0.0132	-4.2546	0.0000
	-			
Russia	0.1142***	0.0254	4.5000	0.0000
South Africa	0.0797***	0.0165	-4.8282	0.0000
Thailand	0.0718***	0.0192	-3.7457	0.0002
Turkey	0.0848***	0.0279	-3.0357	0.0026
Venezuela	0.0184***	0.0043	-4.2603	0.0000
Australia	0.0461*	0.0242	-1.9042	0.0579
Canada	0.0385***	0.0084	-4.5914	0.0000
	-			
Denmark	0.0733***	0.0185	3.9710	0.0001
Germany	-0.0063	0.0296	0.2134	0.8311
Japan	-0.0067	0.0259	0.2599	0.7951
Sweden	0.0090	0.0156	-0.5764	0.5648
	-			
Swiss	0.0839***	0.0173	4.8414	0.0000
UK	-0.0359**	0.0143	2.5012	0.0130
USA		home		

USA	
Overall (30 countries)	
Average	0.0127
<i>t</i> -Stat	0.6929
<i>p</i> -value	0.2469
With the Emerging Markets	
Average	0.0224
<i>t</i> -Stat	0.9271
<i>p</i> -value	0.1822
With the Developed Markets	
Average	-0.0141
<i>t</i> -Stat	-0.8351
<i>p</i> -value	0.2156
Emerging Market – Developed Markets (One-tail Test)	
<i>Difference</i>	0.0364
<i>p</i> -value	0.1894