CARICOM Cross-Border Equity Flows[1]

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Abstract

Globalization and financial integration have caused a phenomenal growth in cross-border equity flows both internationally and regionally among Caribbean Community (CARICOM) member states. All CARICOM countries have open financial markets and have been subject to worldwide equity flows. Further, despite the absence of a formally integrated market, there is much evidence of cross-border trading in equity among CARICOM countries. The paper accomplishes the following (1) a study is carried out on the theoretical and empirical literature on cross-border flows in developed and, especially, developing countries; (2) empirical evidence of cross-border flows and cross-listing of equity capital among CARICOM member states is provided where the information exists (3) a Gravity model is used to explain cross-border FDI flows between countries of the Organization for Economic Co-operation and Development (OECD) and CARICOM countries; (4) Policy recommendations are made which will inform policy makers, stock exchange managers and others about the gains from cross-border trading and aid in further integrating CARICOM markets.

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1. Introduction

The existing literature examines equity flows primarily as they arise in industrialized countries and in the bigger developing countries of Latin America, Asia and Africa. This paper is an attempt to provide a study of cross-border flows among the very small countries of the CARICOM region, which is generally an under studied area. Cross-border equity flows take the form of Foreign Direct Investment (FDI) and Portfolio Investment and data on these flows to and from CARICOM countries, including flows between CARICOM countries, are difficult to obtain. In most cases, the data simply do not exist and this has been the biggest challenge faced in doing this study. There are generally two types of FDI: FDI involving the acquisition of new plant and equipment in a foreign country, known as Greenfield investment, and FDI involving the acquisition of an existing firm in the target country which is referred to as a cross border merger or acquisition. Data on both types of FDI are available although the literature generally does not differentiate between the two. Data however provide evidence that, since the 1980s, world FDI flows mainly take the form of mergers and acquisitions (UNCTAD 2002), although FDI flows to developing economies such as the CARICOM region are principally Greenfield, owing perhaps to the lack of suitable firms for foreign companies to acquire or merge with.

Despite the existence of open financial markets and the presence of international equity flows in the CARICOM region, stock markets in the region are in an embryonic stage of development and cross-border trading of stocks is low. Further, although the CARICOM region has been subject to a fair amount of FDI activity, there are wide disparities across member states in terms of the magnitude, timing and frequency of FDI flows (Caribbean Trade and Investment Report 2005). Cross-border equity inflows are concentrated, with the bulk going to Trinidad and Tobago, followed by the Bahamas and Jamaica, with investors originating mainly from the United States (US) and Europe. Intra-regional investments come largely from Trinidad and Tobago with the major recipient being Barbados, followed by Jamaica.

The rest of this paper is organized as follows: in the following section, there is a review and synthesis of the theoretical and empirical research findings regarding equity flows across national borders. In section three, theoretical and empirical evidence on CARICOM cross-border flows are presented while, in section four, the data and methodology used in the study of the gravity model of FDI behavior are laid out and discussed. Section five presents the empirical

findings of the gravity model and section six gives policy recommendations. The paper then concludes.

2. Literature Review: Theoretical and Empirical Research Findings

Globalization and financial integration have caused the growth of cross-border equity flows to be larger than world GDP growth and growth in international trade (OECD 2002). Studies since the 1960's and early 1970's have highlighted the advantages of holding a global asset base rather than limiting portfolio composition to local assets only (Grubel 1968, Levy and Sarnat 1970, Solnik 1974 and Lessard 1973). This is consistent with neo classical theory which states that, if capital is allowed to flow to where its marginal product is highest, its owners would receive the highest returns. World aggregate savings would be channeled to the most profitable investments and investor risk reduced through more opportunities for international diversification. Developing economies lack domestic savings. Foreign capital inflows could resolve this scarcity problem and, theoretically at least, simultaneously increase competition and improve economic efficiency in the domestic financial market. The fact that capital controls and other barriers to international capital have been relaxed is no doubt because emerging economies are hoping to advance their development agenda through financial liberalization and integration. Furthermore, technology has improved the access to information so reducing transactions cost, differences in financial institutions are disappearing and there have been enormous improvements in financial products, all of which may have contributed to the higher levels of worldwide equity flows.

However, the 1994-1996 Mexican crisis, the Asian, Russian and Brazilian financial turmoil over the period 1997-1999 and the current international financial meltdown, which began in the latter half of 2007 in the US housing market, have shown the volatility and danger of developing economies relying on foreign capital flows for growth since these flows may discontinue at any time and without notice (the famous 'sudden stops'). Further, investors are more prone to suddenly taking their money out of developing economies whenever financial crises occur. Also, equity flows can act as external shocks which can negatively affect macroeconomic variables in developing countries, such as growth, inflation, and exchange rates. Furthermore, according to OECD (2002), "developing economies have poorly developed financial markets, regulation and legislation, which restricts the benefits of foreign equity inflows".

2.1 Portfolio Investment

Lately authors have argued that models of portfolio investment flows should not be based on factor endowment, comparative advantage and autarky prices but should rather seek to incorporate differentiated assets, transactions costs, information asymmetries and "familiarity effects" (Portes and Rey 2004). Within the literature there are two conflicting types of empirical results about cross-border portfolio flows. Firstly, there is evidence of "home bias" provided by French and Porteba (1991) and Portes and Rey (2004). Home bias results when domestic investors prefer to hold less foreign securities in their investment portfolios despite the benefits of holding a globally diversified portfolio. The debate continues as to whether home bias is due to transactions cost, information asymmetries and familiarity effects or whether it is due to trading costs on the goods market (Portes and Rey 2004). According to Tesar and Werner (1994) high transactions cost do not hinder international diversification making it an unlikely explanation for the home bias phenomenon.

Alternatively, there is evidence that domestic investors often buy foreign securities particularly following unexpectedly high returns in foreign countries. Such investors are referred to as "return chasers" and their behavior is described as "trend chasing" or "momentum investing". Bohn and Tesar (1996) believe that return chasing is a significant reason for US equity investors turning to foreign markets. Froot et al (2001), in their study of forty four countries from 1994-1998, provide empirical evidence that portfolio flows are strongly influenced by past returns, which is evidence of return chasing behavior. Choe, Kho and Stulz (2005) provide evidence of this in the Korean stock market.

Compared to developed countries, developing economies appear to be at a disadvantage in attracting portfolio investment flows. Griffin-Jones and Leape (2000) posit that capital flows into developing economies decreased significantly following the East Asian financial crisis. The current global financial crisis may therefore lower portfolio flows to CARICOM as there is a slowdown of world growth. Griffin-Jones and Leape (2000) further claim that the stock markets of developing economies have become more integrated into the stock markets of developed economies reducing the gains from diversification. Low returns accompanied by extreme volatility, a lack of adequate and timely data, unsustainable growth, corruption and inadequate laws and law enforcement were also found to be responsible for low portfolio flows to emerging economies (Griffin-Jones and Leape 2000). Furthermore, portfolio investors felt that there were

not sufficiently large companies left in developing economies to invest in as most of the large profitable companies have been sold to foreign direct investors (Griffin-Jones and Leape 2000).

World equity flows to developing economies have become increasingly concentrated with Brazil, China, Mexico and Turkey accounting for over 80% of all equity flows to developing economies (World Investment Report 2007). There is evidence that investors prefer to invest in FDI rather than portfolio investment in developing economies as FDI allows them greater control and resolves the problem of insufficient protection of foreign investors. Furthermore, cross-listing of emerging economy stock may not bring the benefits expected. Edison and Warnock (2003) show that cross-listing[3] of emerging market companies on a US stock exchange result in an immediate but short lived rise in capital inflows.

In the literature there appear to be no set factors influencing cross-border portfolio investments. There have in fact been few studies on this subject because of inadequate data and there exists no comprehensive theory of international portfolio flows. However the factors affecting global portfolio investment flows are often divided into external "push' factors and domestic "pull" factors. Baek (2006) reports that portfolio investment in Asia was pushed by investor risk and other external factors such as world GDP growth, world stock market performance and US interest rates, while pull factors such as domestic growth, domestic inflation and exchange rates affect portfolio investment in Latin America, making portfolio investment in Asia more volatile. The size of a country's market, interest rates, exchange rates, information asymmetry, distance, transactions technology, transparency, trade in goods and services, stock returns, tax rates on interest and dividends and barriers to international investments are factors that were studied and empirically tested.

Portes and Rey (2004) and Portes, Rey and Oh (2001) use gravity models to prove empirically that information asymmetry is a main factor deterring cross-border portfolio flows. Gelos and Wei (2005) use data from emerging markets and empirically show that investors systematically place less funds in countries that are not transparent. Moreover, funds have a tendency to exit non-transparent countries more quickly during crises. Malloy (2005) provides evidence that local

[3] Cross-listing occurs when a firm lists its equity shares on one or more foreign stock exchanges in addition to its domestic exchange. It is a frequently used method for encouraging foreigners to purchase a country's stock as it supposedly creates an enlarged investor base and increases marketability of a firm's stock.

stock market analysts are more accurate than their foreign counterparts. Bailey et al (2007), in their study of Singapore and Thailand, find that the ability to process information more efficiently by local investors constitutes a barrier to foreign investors.

International portfolio investment may also be linked to international trade in goods: given that the typical investor does consume some level of international goods and services, he/she can hedge his international consumption basket by holding an international investment portfolio. Lane and Milesi-Ferretti (2004) posit that bilateral equity holdings are strongly correlated with bilateral trade in goods and services. Other studies show that portfolio investment flows to developing economies depend on the country's openness to foreign investment. Bekaert et al (2002), for instance, study twenty emerging markets and find that, following financial liberalization, equity capital inflows increased by 1.4 % but three years later there was a reversal. Griffin et al (2004), based on a study of nine emerging markets, show that, within a few days, equity flows into these countries increase following high stock returns. Similarly, Lusinyan (2002) studies US investors in thirty two emerging markets and concludes that they were attracted by strong growth and efficient stock markets.

2.2 FDI

There is an ongoing debate as to whether FDI is beneficial for developing economies. The OECD (2002) outlines the following benefits of FDI to developing economies: "technology spillovers, improved human capital formation, contribution to international trade and integration, increased competitive business environment, enhanced enterprise development, all of which leads to higher economic growth which is an important tool in poverty reduction, improved environmental and social conditions through transfer of cleaner technology and more socially responsible corporate policies. However, low levels of education, health, low technological and entrepreneurial expertise, and insufficient openness to trade, weak competition and inadequate regulatory framework found in developing economies restrict the full benefits of FDI". Numerous factors affect FDI flows and economists have studied the relative importance of these factors in specific industries, over time and across countries.

Macroeconomic variables such as national income, annual inflation and exchange rates are seen as key factors in affecting FDI behavior. Studies examining macroeconomic variables have been done by Froot and Stein (1991) and Grosse and Trevino (1996). Foreign investors seek markets that are large enough to support their operations and benefit from economies of scale. Real GDP can be used as a proxy for market size. UNCTAD (1994) found market size to be a primary determinant of FDI. High inflation creates uncertainty regarding the net present value of a costly long term investment. Trevino et al's (2004) study of Latin American countries confirms that foreign companies invest less in developing countries with high inflation rates. Additionally the exchange rate can affect FDI decisions. The value of a country's currency can fall due to economic and political upheaval and monetary policy. Foreign investors incur higher costs when a host country's currency falls in value. Thus a constant real exchange rate would attract greater FDI inflows. CARICOM economies are characterized by low GDP and growth, high inflation rates but exchange rates have remained relatively stable as most are pegged to the US dollar. In the gravity model presented below real GDP of the target and acquisition countries were looked at and also the prevailing price level in target countries.

Financial markets are also important in affecting the investment decision of firms. Any type of investment is unable to take place without financial markets as they provide the capital needed. The stock market and the banking sector act as providers of long term capital. These are the two sources of capital looked at in this study. CARICOM economies tend to have less developed stock markets compared to OECD countries and therefore rely more heavily on private credit.

The 'tariff-jumping' hypothesis can be used to explain FDI flows. This hypothesis states that firms enter domestic markets either through exports or by setting up local production facilities, but as the cost of exports increases thorough the imposition of tariffs, firms are more likely to establish local production facilities. See Brainard (1997), Markusen (2002), Carr et al (2001) and Blonigen et al (2003). Trade flows between countries can therefore shape FDI. If FDI acts as a substitute for trade there would be a negative relationship between FDI and trade. A stylized fact however is that FDI and trade are positively correlated, which seems to suggest that the trade coefficient can therefore be positive or negative. To further analyze the effect of trade on FDI, various regional trade agreements can be looked at (di Giovanni 2005).

Distance may act to stimulate or discourage FDI. Transactions cost play a great role in a firm's FDI decision. In the international finance literature, like the international trade literature, such costs are assumed to increase with the geographic distance between two countries due to information asymmetries. Evidence is provided by Portes and Rey (2004), Portes, Rey and Oh (2001) and Ahearne et al (2000). In this case distance and FDI are negatively related. However, a stylized fact is that FDI and distance are positively related.

Besides the distance between two countries culture may influence transactions cost. One aspect of culture is language. Information may be communicated more easily if both countries share a common language and this acts to stimulate investment as shown by di Giovanni (2005) and Buch et al (2004). There are many other factors which act as a proxy for transactions cost such as private sector regulations, bank specific and macroeconomic factors (Buch et al 2004). For practical reasons and limited data this study only considered distance and a common language in affecting transactions cost.

Another factor that may affect a firm's FDI decision is the tax rate in the host country, though Economists do not consider it be a major determinant. However, as the economy becomes more globalized international investors will increasingly consider the tax burden of different countries.

Table 1 below summarizes the main factor affecting cross-border portfolio and FDI flows.

Table 1
Main Factors Affecting Portfolio Investment and FDI

Factor	**Effect**	**Factor**	**Effect**
GDP/ market size	+	Transaction costs/ technology	-
Inflation	-	Transparency	+
Exchange rates	-	Trade in goods and services/ agreements	-/+
Stock market development/ returns	+	Capital controls	-
Availability of private credit	+	Tax rates	-
Information asymmetry	-	Interest rates	-
Distance	-/+	Dividends	+

3. Theoretical and Empirical Evidence of Cross-Border Equity flows in CARICOM

Data shows that CARICOM cross-border equity flows took off in the late 1980s as member states recognized the importance of intra-regional financial flows and financial integration. The Grand Anse Declaration (1989) created a Single Market and Economy and proposed a CARICOM Regional Stock Exchange (CRSE), which would permit the free movement of capital. This period also coincided with the revival of the neoclassical paradigm of outward-looking, market-oriented development, with globalization and financial liberalization being the way forward. Since then CARICOM economies have been part of the global trend of increasing financial liberalization, which has led to a significant increase in cross-border capital movements. According to Williams (2009), greater competition, firms seeking higher rates of return and their need to expand their business in the region have also contributed. Worrell and Jhinkoo (2008) posit that CARICOM intra-regional equity flows mainly take the form of cross-border ownership involving the largest companies in the region, particularly in the financial sector. It is also possible that CARICOM cross- border equity flows are of a "resource and market-seeking nature rather than of an efficiency or technology-seeking nature" (Caribbean Trade and Investment Report, 2005). Also, the increase in Trans-Caribbean corporations has augmented equity flows in the region, with their main activity being in Trinidad and Tobago followed by Barbados and Jamaica (Caribbean Trade and Investment Report, 2005). CARICOM intra-regional trade is however still larger than its intra-regional equity flows (Caribbean Trade and Investment Report, 2005).

3.1 CARICOM Portfolio Investment

CARICOM cross-border trading in stocks is a fairly recent phenomenon, beginning only in April 1991 when the three major stock exchanges - the Barbados Stock Exchange (BSE), the Jamaica Stock Exchange (JSE) and the Trinidad and Tobago Stock Exchange (TTSE) - began cross-listing. Since then all other CARICOM countries have established a stock exchange in one form or the other. There are currently nine stock exchanges in the CARICOM region: in addition to the three already mentioned, the six others are the Bahamas International Securities Exchange (BISX), the Belize Stock Exchange, the Guyana Association of Securities Companies and Intermediaries (GASCI), the Haiti Stock Exchange, the Suriname Stock Exchange and the Eastern

Caribbean Stock Exchange (ECSE). At the moment CARICOM stock markets are in an embryonic stage of development, which poses challenges for cross-border activity in the region.

The Stock Exchanges are small in terms of the number of listed companies relative to the number of companies in each given country (Jones-Hendrickson 1994). According to Bissember (1997) there are rarely any new issues on the Guyanese Stock exchange and this is no different elsewhere in the CARICOM region. Moreover, the CARICOM Regional Stock Exchange (CRSE) is still yet to be made a physical entity, though it was created as far back as 1989 by the Grand Anse Declaration. CARICOM has however made changes in its rules and regulations to accommodate cross-listing. In the future "CARICOM aims for the CRSE to advance the free movement of capital across the region, increase investment opportunities, encourage optimum financing for CARICOM firms and enhance the attractiveness of the region as an area for investment" (CARICOM Secretariat 2008).

Studies on cross-border trading and intra-regional capital flows in the CARICOM region have been done by Ramsaran (1986), Jones-Hendrickson (1994) and Bissember (1997). According to these authors, cross-border CARICOM flows arise in modest amounts as these markets are characterized by low liquidity, low secondary trading, limited Initial Public Offerings and offer a narrow range of products (Sergeant 2009). CARICOM stock markets have also been shown empirically to be weak form inefficient (Watson 2009) implying that trading volumes including cross-border trading volumes, are low. In addition, CARICOM firms rely heavily on domestic savings and prefer debt financing rather than equity, whether domestic or foreign (Caribbean Trade and Investment Report 2005). Also, the high level of investor risk particularly foreign exchange risk, deficiency in timely information and lack of hedging instruments which are particularly important when there are floating exchange rates have been identified as being responsible for the low volume of cross-border trading (Jones-Hendrickson 1994).

Regional trading in stocks in the CARICOM region may also be low because of inadequate levels of investor education. The CARICOM Secretariat (2008) argues that "CARICOM nationals are not used to investing in stocks; rather they take investment to mean activity like buying a house or putting money in the bank". The lack of efficient trading systems is also responsible for low cross-border trading though CARICOM countries are moving towards

electronic trading systems. For example the JSE and the TTSE have implemented the Horizon Electronic Trading System while the BSE has implemented the Order Routing method. The ECSE and the BISX also have automated trading systems. However Guyana, Belize, Suriname and Haiti still use an open outcry system. To increase intra-regional trading of stock all CARICOM countries have to implement modern trading systems (Sergeant 2009). There is also the problem of inadequate regulation, interlocking directorates and few institutional investors (Sergeant 2009).

Sergeant (2009) argues that the existence of many family-owned businesses, where there is little or no effective division of ownership and control, is a major reason for the small number of listed and cross-listed companies in the region. Also it is expensive for firms to list on the domestic stock exchange due to listing fees, legal fees and the costs of producing proper financial statements. Cross-listing, on the other hand, entails higher costs as firms will have to comply with foreign reporting standards and may have to reconcile financial statements with international standards. These costs may be higher than the benefits to be gained as secondary trading activity in CARICOM is low.

Of the stock exchanges in the CARICOM region, those of Belize, Haiti and Suriname at this point in time have data neither on listed companies nor any cross-listed stocks. For a complete enumeration of all listed and cross-listed companies on the other CARICOM stock exchanges, see tables A1 to A6 in the appendix. The JSE, which is the oldest exchange, commenced operations in 1968 and, to date (December 2009), has the highest number of companies listed as shown in table 2. The TTSE, which opened in 1981, has the second highest number of listed firms followed by the BSE. All others have less than 20 listed companies. The fact that each domestic stock exchange is at a different level of development would pose problems for cross-border trading and the formation of the CRSE.

Table 2
Number of Domestic and cross listed firms as at December, 2009

Stock Exchange	Total Number of Firms	Number of Local Firms	Number of Cross-Listed Firms	Percentage of Cross-Listed Firms
1.TTSE	38	26	12	32%
2.BSE	25	20	5	20%
3.JSE	46	43	3	7%
4. ECSE	14	11	3	21%
5.BISX	19	17	2	11%
6.GASCI	14	13	1	7%

Source: Individual Stock Exchanges

These numbers are inconsequential when compared to exchanges like the New York Stock Exchange (NYSE), Nasdaq, the London Stock Exchange, the Tokyo Stock Exchange and Euronext where over 3000 companies are listed. A small number of listed companies would lead to a low amount of foreign purchases of stocks as investors are limited in their choice. CARICOM countries must therefore seek to encourage more firms to list on their exchanges.

There have been marginal increases in the number of cross-listed firms on each stock exchange in CARICOM. The latest development has been the cross-listing of Trinidad Cement Limited (TCL) on the GASCI in January 2007. Overall there are 14 cross-listed CARICOM firms. Of these, First Caribbean International Bank of Barbados and TCL are cross-listed on 4 CARICOM exchanges, followed by Grace Kennedy Limited on 3 and Jamaica Money Market Brokers Limited on 2 (see table 3 below). All other cross-listed companies are listed on their domestic stock exchange and 1 other CARICOM stock exchange. CARICOM cross-listed firms tend to be those with business operations across the region, especially in the financial sector (see tables 3 and 4 below). Worrell and Jhinkoo (2008), show that the cross-listing of securities on the region's 3 major securities exchanges (BSE, JSE and TTSE) has made a limited contribution to the deepening of financial integration. As the number of listed and cross-listed companies grow(s) there would be an increase in equity investment instruments available to regional investors increasing equity flows in the region.

Table 3
CARICOM Cross Listed Companies, as at December 2009

Cross-Listed Company	Home Exchange	Other Exchanges on which Listed
1. First Caribbean International Bank	BSE	BISX, ECSE, JSE, TTSE
2.Trinidad Cement Limited	TTSE	BSE, ECSE, GASCI, JSE
3.Grace Kennedy Limited	JSE	BSE, ECSE, TTSE
4. Jamaica Money Market Brokers Limited	JSE	BSE, TTSE
5. Neal & Massy Holdings Ltd.	TTSE	BSE
6. Guardian Holdings Limited	TTSE	JSE
7. National Commercial Bank Jamaica Limited	JSE	TTSE
8. Barbados Shipping & Trading Company Ltd.	BSE	TTSE
9. Supreme Ventures Limited	JSE	TTSE
10.Capital and Credit Financial Group Limited	JSE	TTSE
11.Sagicor Financial Corporation	BSE	TTSE
12.Scotia DGB Investments Limited	JSE	TTSE
13.Capital and Credit Merchant Bank Limited	JSE	TTSE
14.Fortress Caribbean Property Fund	BSE	TTSE

Source: Individual Stock Exchanges

Table 4
Distribution of Cross-listed Firms, as at December 2009

Sector	Number of Firms	Percentage
Conglomerates	3	22%
Financial Services	9	64%
Manufacturing	1	7%
Trading	1	7%
Total	14	100%

Source: Individual Stock Exchanges

There are different types of cross-listing. CARICOM firms have engaged in ordinary listing whereby a firm lists its shares for trading on at least two exchanges located in different countries. However, with financial innovation, there are other methods of cross-listing. CARICOM countries may implement depository receipts to increase regional equity flow activity. Depository receipts are bank issued financial securities representing a share of ownership in a public company traded in a foreign currency. It allows the investor to purchase equity in foreign countries without having to go directly to the foreign market. A depository receipt listing improves the liquidity of a firm's stock as its prospective investor base is expanded together with the visibility of the company on both the domestic and foreign market stimulating cross-border flows.

Another phenomenon is that of firms in emerging markets seeking cross-listing on the world's largest stock exchanges. The Bahamas and Antigua and Barbuda are the only CARICOM countries to have done so. Teekey Tankers (Bahamas) Limited was listed on the NYSE in 2007 and Steiner Leisure Limited and Ultrapetrol Limited were both listed on the Nasdaq in 1996 and 2006 respectively. Sinovac Biotech Limited from Antigua and Barbuda was listed on the Nasdaq in 2009. A priori, this is expected to increase international equity flows though empirical evidence provided by Edison and Warnock (2001) shows that cross-listing of emerging market equity on a US exchange results in an immediate but short-lived rise in capital inflows.

3.2 CARICOM FDI

FDI is playing an increasingly important role in the global economy: flows have increased exponentially since the 1980s, rising from US$60 billion in 1980 to over US$600 billion per year over the period 1998-2007 (UNCTAD 2008). What is more, FDI outflows from OECD countries account for a consistently large share of world flows over the period 1970-2007. On average, they account for 74% of the total over the period, with a maximum of 92% and a minimum of 58%. CARICOM inflows, on the other hand, are a miniscule proportion of world outflows: on average 0.55% over the period 1970-2007, with a maximum of 2.61% and a minimum of 0.03%. CARICOM's share of the world's inflows tends to follow the pattern of its share of OECD outflows. Table 5 (a)-(b) below shows some basic statistical information about the ratio of OECD to world FDI outflows, of CARICOM FDI inflows to world FDI outflows and of CARICOM FDI inflows to OECD FDI outflows:

Table 5
Ratios (%) (1) OECD to Total World FDI outflows (2) CARICOM Inflows to World Outflows (3) CARICOM Inflows to OECD Outflows 1970-2007

(a) Summary Statistics

	OECD/WORLD	CARICOM/WORLD	CARICOM/OECD
Mean	74.04	0.55	0.75
Median	73.94	0.37	0.51
Maximum	91.62	2.61	3.54
Minimum	57.86	0.03	0.03
Std. Dev.	8.77	0.61	0.80

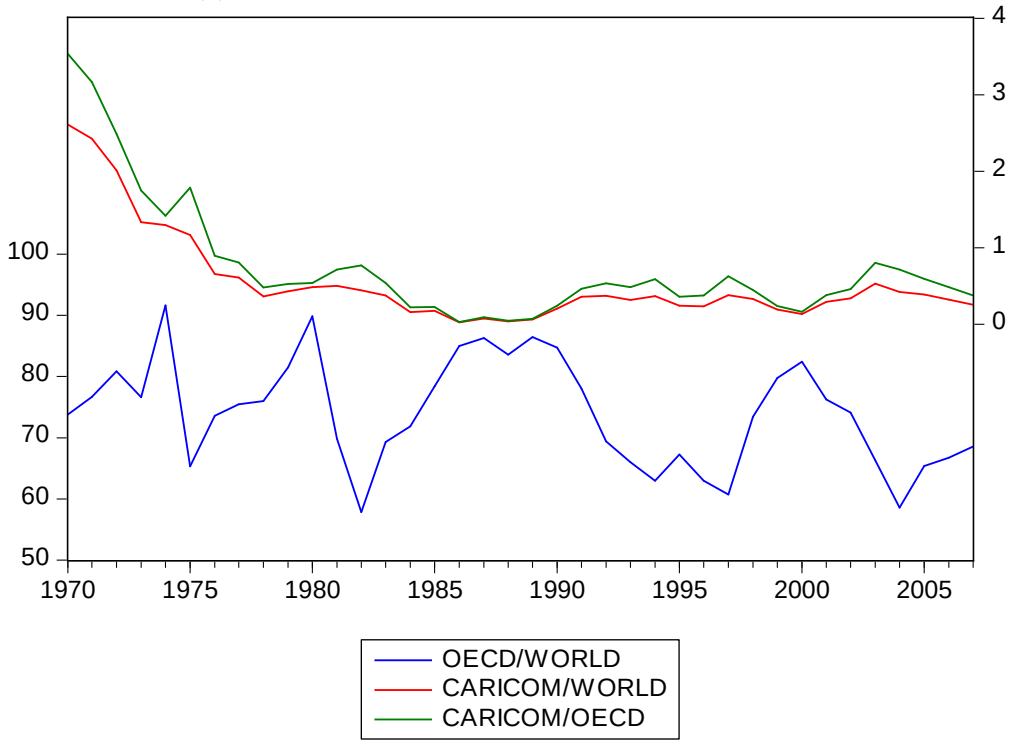
(b) Time Series Data

	(1)	(2)	(3)
1970	73.78	2.61	3.54
1980	89.85	0.49	0.54
1990	84.75	0.21	0.24
2000	82.41	0.13	0.16
2001	76.29	0.29	0.38
2002	74.09	0.34	0.46
2003	66.29	0.53	0.80
2004	58.63	0.42	0.72
2005	65.38	0.39	0.60
2006	66.76	0.32	0.48
2007	68.59	0.26	0.38

Source: UNCTAD, FDI database

Figure 1 below shows graphically the evolution of the ratios from 1970 to 2007:

Figure 1
Ratios (%) (1) OECD to Total World FDI outflows (2) CARICOM Inflows to World Outflows (3) CARICOM Inflows to OECD Outflows 1970-2007



Notwithstanding its small share of world FDI flows, CARICOM has experienced higher levels of international and regional FDI flows compared to portfolio flows. International FDI flows are largely Greenfield investments (which is the case with other developing countries) as there are usually not many domestic firms attractive enough for firms from developed companies to acquire, while intra-regional flows are primarily mergers and acquisitions as CARICOM firms find it cheaper to expand this way (Rambarran and Elbourne 2006).

A major problem faced in the study of CARICOM cross-border FDI flows is that flows by geographic source and destination are difficult to obtain for CARICOM countries except in the case of Trinidad and Tobago. The Central Banks in the region have only now begun disaggregating the flows by source and destination. The latest data available from the UNCTAD gives information for the period 1990 to 2002 and the data are incomplete in that the data set is based on only the few countries that chose to report.

World FDI inflows have increased five-fold from 1995 to 2008 and CARICOM inflows increased from US$827 million in 1995 to US$5606 million in 2008, a seven-fold increase (UNCTAD, FDI database 2009) as shown in table 6 below.

Table 6
FDI Inflows by Region for Selected Years

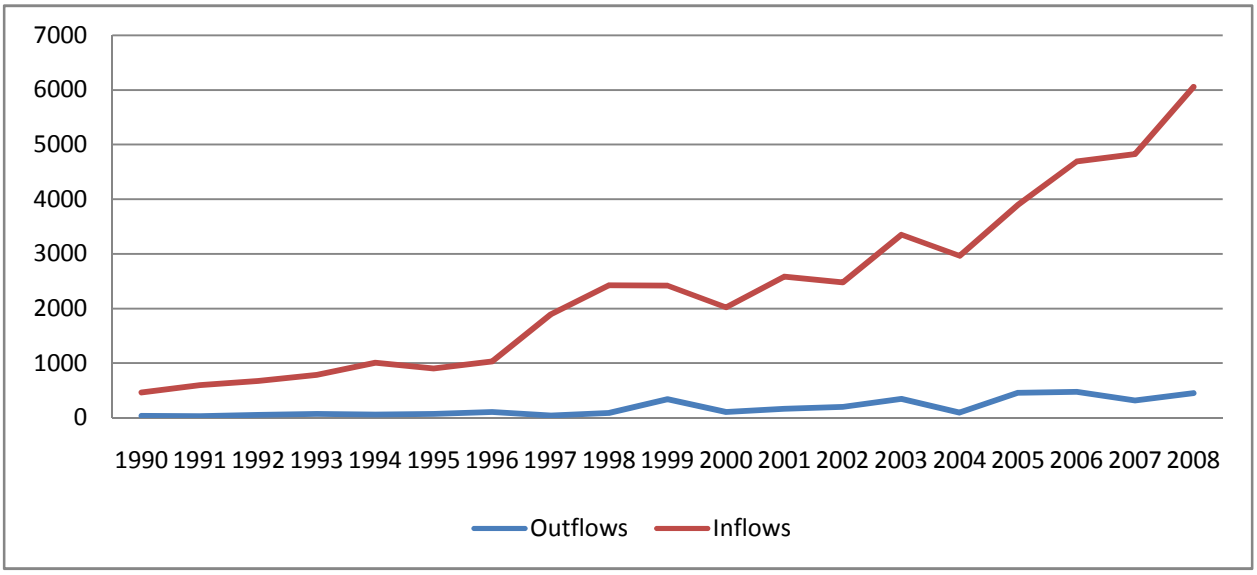
Country/Region	US$ Millions				Percentage of total			
	1995	2000	2005	2008	1995	2000	2005	2008
World	341144.3	1381675	973329	1697353.2	100	100	100	100
Developed	221103.58	1117795	613089	962258.67	65.4	81	64	61.45
Developing	115973.2	256882.8	329292	14909288	34.3	18.71	35.66	38.23
CARICOM	826.51	1916.1	3445.35	5606.19	0.24	0.20	0.34	0.33

Source: UNCTAD, FDI database.

CARICOM countries must however prepare for the worst as the UNCTAD's World Investment Report (2009) predicts a significant reduction in cross-border FDI flows because of the global financial crisis which began in the US housing market in the late 2007. World inflows fell from US$ 1.7 trillion in 2008 to US$ 1.2 trillion in 2009. There is expected to be a slow recovery in 2010 when inflows are estimated to rise to approximately US$1.4 trillion and to US$1.8 trillion in 2011. CARICOM's share of world FDI inflows remains minuscule compared to other developing countries at a little more than 0.3 % in 2008 compared to 38% for all developing countries (see table 6 above).

CARICOM inflows have however been greater than its outflows since 1990: CARICOM attracted, on average, over US$1.9 billion more capital than it invested overseas in the period 1990 to 2007 (Overview of Global and CARICOM Investment Trends 2009). In 2008 the region spent US$ 449.39 million in FDI outflows while receiving US$ 5606.19 million in inflows, a difference of US$ 5156.8 million. Figure 2 below illustrates.

Figure 2
CARICOM FDI Inflows and Outflows, 1990-2008 (US $million)



Source: UNCTAD, FDI Statistics database.

Outflows come mainly from Trinidad and Tobago, which ranks 36 out of 141 in the World Investment Report Outward FDI Performance Index (see table A7 in the appendix) while outflows go largely to other CARICOM countries (World Investment Report 2009).

The World Investment Report (2008) classified the Bahamas and Trinidad and Tobago as having high FDI performance and potential, while Jamaica and Guyana were said to have high FDI performance but low potential. Haiti and Suriname were both considered to be underperformers. The Report ranked the Bahamas 5th and Guyana 11th in terms of Inward FDI performance for 2007(see table A7 in the appendix). This is a significant improvement for Guyana given that it was ranked 40th in 2004. Trinidad and Tobago accounts for the highest level of inflows owing to its large hydrocarbon industry. However in 2008 its Inward FDI Performance rank went from 36 to 54 out of 141 countries indicating a fall in performance (World Investment Report 2009). All CARICOM countries except Saint Kitts and Nevis and Suriname experienced an increase in inflows from 2000 to 2008. However, there have been significant year to year fluctuations. Bissember (1997) asserts that "CARICOM FDI inflows do not exhibit a smooth upward trend; rather, the flows are erratic". CARICOM economies are primarily natural resource based with activities concentrated in primary and tertiary sectors namely, mining, energy, agriculture,

forestry and tourism services with some diversification into garments and data processing (Caribbean Trade and Investment Report 2005).

FDI inflows to the CARICOM region are becoming progressively concentrated. The Caribbean Trade and Investment Report (2005) found that in 2005 Antigua and Barbuda, the Bahamas, Jamaica, Saint Lucia, Suriname and Trinidad and Tobago were the main investment recipients, attracting 85 % of FDI inflows, but, in 2008, only the Bahamas, Jamaica and Trinidad and Tobago accounted for this same percentage of inflows. Table 7 shows FDI inflows for individual CARICOM countries for the period 2000-2008.

Table 7
CARICOM FDI inflows, 2000-2008

	US$ Millions								
Country	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**
Antigua & Barbuda	67	112	136	179	95	238	361	358	255
Bahamas	469	493	312	642	443	563	706	746	700
Barbados	19	19	17	58	-12	62	105	233	133
Dominica	20	21	22	32	27	32	29	61	60
Grenada	39	61	64	91	66	73	96	190	168
Guyana	67	56	44	26	30	77	102	152	178
Haiti	13	4	6	14	6	26	160	75	30
Jamaica	469	614	479	721	602	682	882	867	789
St. Kitts & Nevis	99	90	83	78	63	104	115	164	94
St. Lucia	58	63	119	112	81	82	238	259	110
St. Vincent & Grenadines	38	21	34	55	66	40	109	117	96
Suriname	-148	-27	146	201	286	399	323	316	-234
Trinidad& Tobago	680	835	791	808	1001	940	883	830	3047

Source: UNCTAD, FDI database

CARICOM's share of world Greenfield investments has been low. From 2002 to 2008 it averaged less than 0.1 %. Moreover, the number of Greenfield investments has declined from 6 in 2007 to 3 in 2008 (see table A8 in the appendix). Greenfield investments coming out of CARICOM have however been higher, reaching a high of 14 in 2003 with Trinidad and Tobago being the main investor (see table A9 in the appendix). The values of cross border mergers and

acquisitions, where the seller was from CARICOM, fell from 2003 to 2005 but increased significantly in 2006. However, Grenada, Haiti, St Kitts and Nevis and Suriname did not contribute. The Bahamas was the main recipient receiving more than 73 per cent of all mergers and acquisitions in CARICOM (see table A10 in the appendix). In terms of CARICOM purchases of foreign companies there has been a fall from 2004 to 2005 with a recovery in 2006. The Bahamas has been the main investor here (see table A11 in the appendix).

The limited merger and acquisition activity in CARICOM may be due to the thinness of CARICOM stock exchanges, the low level of development in the financial sector and a predominance of family owned and controlled businesses (Russell and Khan 1996). According to Russell and Khan "the 1990s marked the first wave of merger and acquisition activity in CARICOM and Trinidad & Tobago owned commercial banks were the leaders". Data on CARICOM cross-border mergers and acquisitions are usually not published. CARICOM mergers and acquisitions take place mainly in the financial sector, particularly banking. Internationally this trend also holds. Intra-regional CARICOM investment is principally of the merger and acquisition type and it has been used in most cases of cross-border investment in the financial services sector in the region and they are largely the result of government divesture mainly among commercial banks and some activity among insurance companies and directives from multilateral lending agencies (Russell and Khan 1996 and Rambarran and Elbourne 2006).

The Central Bank of Trinidad and Tobago provides detailed data on all FDI inflows and outflows. The main FDI investors into the economy are the USA, the UK while inflows from Germany and India have been mounting. Table 8 below gives details:

Table 8
Trinidad and Tobago FDI by country of origin, 2000-2007 (US$ Millions)

Country	2000	2001	2002	2003	2004	2005	2006	2007
USA	315.9	372.3	352.7	375.8	697.5	693.8	626.7	574.4
UK	254.7	307.1	290.9	297.4	169.9	164.5	150.1	159.1
Canada	1.8	7.1	7.2	11.7	2.6	1.4	2.6	2.9
Germany	14.0	36.5	34.8	35.6	42.5	41.4	37.6	43.1
Japan	0.0	0.1	0.1	0.2	0.1	0.2	0.2	0.2
India	11.1	20.8	19.8	20.1	24.2	16.4	26.5	21.2
Other	82	91.1	85.2	67.5	61.3	22.0	39.0	29.1
Total	679.5	834.9	790.7	808.3	998.1	939.7	882.7	830.0

Source: Central Bank of Trinidad and Tobago

Trinidad and Tobago continues to be the main intra- regional CARICOM investor, investing an annual average of US $ 156.92 M for the period 1999 to 2009. Its primary recipient is Barbados followed by Jamaica. Table 9 below gives details of Trinidad & Tobago's FDI outflows by company of origin and destination to countries of the CARICOM region over the period 1999-2005:

Table 9
Trinidad and Tobago FDI Outflows to CARICOM, 1999-2005

Year	Local Company	Foreign Company	Host Country	Value of Investment US$M
1999	Neal and Massy	Barbados Shipping and Trading Company	Barbados	24.6
	Guardian Holdings Limited	Mutual Life Crown Eagle and Dyoll Life	Jamaica	30.1
	Republic Bank Limited	NBIC	Guyana	5
	Republic Bank Limited	Republic Bank Barbados Limited	Barbados	2
	Trinidad Cement Limited	Caribbean Cement Company	Jamaica	29
	Total			**90.7**
2000	Angostura Holdings	Suriname Alcoholic Beverages	Suriname	0.75
	Royal Bank	ABN, Amro	Suriname	8.9
	Total			**9.65**
2001	RBTT Financial Holdings	Union Bank of Jamaica	Jamaica	35.6
	Total			35.6
2002	Ready Mix West Indies	Premix and Precast Concrete	Barbados	0.42
	Ansa McAL	Grenada Brewers Limited	Grenada	0.45
	Total			**0.87**
2003	Republic Bank Limited	Barbados National Bank	Barbados	109.4
	RBTT	Ernst and Young Trust Company	Barbados	3
	National Insurance Board	Barbados Shipping and Trading	Barbados	32
	Republic Bank Limited	East Caribbean Financial Holdings	St. Lucia	8.4
	Total			**152.8**
2005	Neal and Massy Holdings	Shell Jamaica	Jamaica	35
	Total			**35**

Source: Caribbean Trade and Investment Report (2005), Central Bank of Trinidad and Tobago BOP Report 2005

Table 10 below gives details of total investment by Trinidad & Tobago companies in various CARICOM countries over the period 1999-2005:

Table 10
Trinidad and Tobago Investment in CARICOM countries, 1999-2005 (US $ Million)

Country	Amount
Barbados	171.42
Grenada	0.45
Guyana	5
Jamaica	129.7
St. Lucia	8.4
Suriname	9.65
Total	**324.62**

Source: Central Bank of Trinidad and Tobago

Table 11 below gives the total FDI outflows from Trinidad & Tobago to CARICOM over the period 1999-2009:

Table 11
Trinidad and Tobago FDI inflows to CARICOM for the period 1999-2009

Year	FDI Outflows (US$M)
1999	90.7
2000	9.7
2001	35.6
2002	0.9
2003	152.8
2004	25.4
2005	341.0
2006	370.0
2007	0.0
2008	700.0
2009	0.0

Source: Central Bank of Trinidad and Tobago

4. A Gravity model for OECD-CARICOM FDI: Data and Methodology

It has been shown above that the motives for international equity flows are many and no single econometric model can take into account all the variables. Furthermore, studies usually focus specifically on FDI or portfolio investment flows alone. While there is no fully developed theory of cross-border equity flows, possible determinants of these flows have been identified as economic size, macroeconomic stability, level of financial sophistication, trade, transactions cost, institutional/political/legal factors, geography, common culture, information asymmetries and the level of financial liberalization. Empirical analysis remains underdeveloped due to limited data sets. Analysis of international equity flows are done mostly on FDI data which are easier to obtain compared to portfolio data. The major challenge faced by this study is the lack of

data on cross-border equity flows among CARICOM countries where both FDI and Portfolio investment data sets are difficult to obtain. A reasonably large data set is available for FDI data flows between CARICOM and OECD countries, however, so that some econometric modeling and testing is possible.

The process by which FDI statistics are recorded by all countries is by following the international standards set out by the International Monetary Fund (IMF) in its Balance of Payments manual. The OECD countries provide detailed information, explicitly stating the source and destination of all FDI flows. CARICOM countries do not. The Central Bank of each CARICOM country is responsible for recording FDI flows with the exception of the OECS countries where the National Statistics Office carries out this function. FDI statistics may be found in the capital account of all CARICOM countries' Balance of Payments statement. However the degree of detail varies. All CARICOM countries in the study with the exception of Trinidad & Tobago simply record gross inflows and outflows. There is no information on cross country flows, that is, the data do not say where the flows come from or where they are going.

In this study, an attempt is made to model FDI outflows of twelve CARCOM countries and eight OECD countries using a Gravity model. Gravity models have been traditionally used in international Economics as an empirical model in the study of bilateral trade in goods. The model assumes that trade between countries can be compared to the gravitational forces between two objects. Bilateral trade flows are directly related to the countries' size measured by their real GDPs and inversely related to the distance between them. The model also states that a log linear specification characterizes the data fairly well. Thus in estimating the model the logs of both sides are taken. GDP captures the market dimension and is expected to have a positive effect while distance acts as a proxy for transport cost and is expected to have a negative sign. Additional explanatory variables and dummy variables can be added for further analysis. The basic model may take the following form:

$$\ln T_{ij} = \beta_0 + \beta_1 \ln Y_i Y_j + \beta_2 \ln Distance_{ij} + e_{ij}$$

where T_{ij} is gross trade flows between country i and j, Y_i is the GDP of country i, $Distance_{ij}$ the physical distance between country i and country j, and e_{ij} is the error term assumed to be normally distributed with zero mean and variance equal to 1.

Pioneer studies using gravity models were done by Tinbergen (1962) and Linneman (1966). Though the models were empirically successful they were criticized for their lack of theoretical foundation. However, Anderson (1979), Deardorf (1998), Evenett and Keller (2002) and many others have justified the use of gravity models on theoretical grounds. Increasingly the model is being adopted by financial economists for the study of FDI and portfolio flows between countries. See, for example Portes and Rey (2004), Portes, Rey and Oh (2001), Flaven (2002), and di Giovanni (2003).

The gravity model used in this study augments the standard gravity model with macroeconomic, financial, trade, transaction costs and tax variables some of which takes the form of dummy variables. The specification is as follows:

$$\ln(FDI_{ij,t}) = \beta_0 + \beta_1 \ln Y_{it} + \beta_2 \ln Y_{jt} + \beta_3 \ln P_{it} + \beta_4 \ln (MC/Y^N)_{jt} + \beta_5 \ln (Credit/Y^N)_{jt} + \beta_6 \ln Dist_{ij} + \beta_7 \ln Trade_{ij,t} + \beta_8 CU_{ij,t} + \beta_9 FT_{ij,t} + \beta_{10} SA_{ij,t} + \beta_{11} Other_{ij,t} + \beta_{12} Lang_{ij,t} + \beta_{13} \ln Tax_{i,t} + e_{ij,t}$$

where i is the target country, j the investor country, t represents time and $FDI_{ij,t}$ measures gross FDI outflows from country i to country j in year t, Y real GDP, P the price level, MC stock market capitalization, $Credit$ is credit provided to the private sector by bank and other non bank financial institutions, Y^N nominal GDP, $Dist_{ij}$ the distance between the capital cities of countries i and j, $Trade_{ij}$ is real goods trade flow from country i to j, CU_{ij} is a dummy variable equal to1 if countries i and j belong to a common Customs Union, FT_{ij} is a dummy variable equal to 1 if countries i and j belong to a common Free Trade Agreement, SA_{ij} is a dummy variable equal to 1 if i and j belong to a common Service Agreement, $Other_{ij}$ is a dummy variable equal to 1 if the target and acquiring countries i and j belong to any other type of Regional Trade Agreement, $Lang_{i,j}$ is a dummy variable equal to 1 if countries i and j share a common language, Tax is the average corporate tax rate and $e_{ij,t}$ is the error term assumed to be normally distributed with zero mean and variance equal to 1.

A priori, the coefficients of the following variables should be positively signed: Y, MC, $Credit$ and $Lang$. P and Tax are expected to be negatively signed while the signs of all the other coefficients may be either positive or negative.

FDI data were taken from the OECD's data base, which gives FDI inflows and outflows of all OECD countries to the rest of the world in millions of US dollars for the period 2000-2007.

Twenty countries were examined: the OECD countries were France, Germany, Hungary, Luxembourg, Mexico, Netherlands, United Kingdom and United States of America while the CARICOM countries were those for which data was available-Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Haiti, Jamaica, St. Kitts & Nevis, St. Lucia, St. Vincent & the Grenadines and Trinidad & Tobago. Data for Trinidad & Tobago FDI outflows to other CARICOM countries were also included and were obtained from that country's Balance of Payments Annual Report (2008). It must be stated that the dataset is incomplete in that FDI inflows and outflows were only given for the OECD countries and Trinidad and Tobago. The data for all other CARICOM countries represent FDI outflows from CARICOM countries to OECD countries only. This limitation is acknowledged but the dataset was used because of the lack of FDI statistics among CARICOM countries (Harrison 2005).

Real GDP data were taken from the World Bank's World Development Indicators (WDI) where they are recorded in billions of US dollars with 1995 used as the base year. Price level was measured by the consumer price index in each country and the data were obtained from the International Financial Statistics (IFS) database with 2005 as the base year. Market capitalization data were taken from Standards and Poor's Emerging Stock Markets Factbook (2008) in millions of US dollars and covering most of the countries in the study for all the years considered. Private credit data were taken from the IFS database and comprises credit provided by banks and non bank financial institutions. The data were denominated in each country's national currency and had to be converted to US dollars using the end of period national currency to US dollars exchange rate for each year considered. Exchange rate data were taken from the IFS database. Nominal GDP data were taken from the WDI denominated in millions of US dollars. The above was then used to construct the market capitalization to GDP ratio and the private credit to GDP ratio for each year of the study.

Data on the gross bilateral trade flows among countries were compiled from two sources: the Caribbean trade (Carib trade) database and the United Nations Commodity Trade Statistics (UN Comtrade) database. The Carib trade database comprises of bilateral trade of only Caribbean countries. The UN Comtrade database was thus used to as a supplement. Information on whether both countries belong to a common Customs Union, Free Trade Agreement, Service Agreement and any other Regional Trade agreement was provided by the World Trade Organization Regional Trade Agreements database. This was used to create four dummy variables to further

analyze the effects of trade. The database covers all trade agreements up to December 2008 and covers agreements which are in force but have not been notified, those signed but not yet in force, those currently being negotiated, and those in the proposal stage. It also covers all the countries in the study. Distance was taken to mean the physical distance between the capital cities and was provided by the Central Intelligence Agency World Fact Book. Information on whether two countries share a common language was also obtained from this source.

Tax data were provided by the World Tax Database created by the Office of Tax Policy Research at the University of Michigan Business. The database offers a wide range of tax rates for 150 countries. It however does not cover all the years of the study. The average corporate tax rate of the target country was used. Though this does not capture the full effects of taxes it was used to simplify the analysis.

5. Analysis of Results

The gravity model was estimated by pooling the data across the twenty countries with the method of estimation being (pooled) Ordinary Least Squares. Table 12 below summarizes the results.

Table 12
Summary of Results of Gravity Model

Variable	Coefficient	p-value
Y_i	1.198126	0.0000
Y_j	1.100664	0.0000
P	-5.719124	0.0000
$(MC/Y^N)_j$	0.096901	0.0296
$(Credit/Y^N)_j$	1.317641	0.0000
Dist	-1.788559	0.0000
Trade	-0.027167	0.1844
CU	7.400023	0.0000
FT	15.00556	0.0000
SA	-7.941388	0.0000
Other	-8.793793	0.0009
Lang	-2.937632	0.0000
Tax	-0.245595	0.0000

The real GDP functions as a measure of market size. The GDP coefficients were large, positive and significant for both the target and acquiring countries. Thus countries with a high GDP are more likely to be investors, and they are also more likely to invest in countries with high GDPs. Buch et al (2004) found similar results in their study of international bank mergers. The coefficient for the price level is notably large and highly significant. Firms wish to invest in countries with a low and stable price level. Financial variables appear to play a critical role in influencing FDI outflows. A 1% increase in the market capitalization to GDP ratio leads to a 0.99% outflow of FDI. Private credit appears to play an even more significant role since a 1% rise in the private credit to GDP ratio causes FDI outflows to increase by 1.32%. Similar results are obtained by di Giovanni (2005) who finds that both the market capitalization and private credit to GDP ratios to be highly significant but that the stock market played a greater role than private credit. Also, Hijzen et al (2007), who study twenty OECD countries, found that mergers are positively affected by the size of the financial markets in both the target and acquiring countries.

The trade coefficient is not significant. FDI may therefore be acting as a substitute for trade. In examining the trade dummies a common service agreement and other trade agreements negatively impact on FDI. Alternatively a common Customs Union and Free Trade agreement positively impacts FDI. The precise impact of trade is therefore indeterminate, but it appears to be more positive than negative.

The distance coefficient was negative and highly significant. This illustrates the importance of information asymmetries across countries in deterring FDI flows rather than transport cost stimulating FDI flows. The larger apart two countries are the higher the information cost which would impact negatively on FDI. Portes and Rey (2004) investigated the hypothesis that distance can be used as a proxy for information cost which was highly significant.

The language dummy has a highly significant negative value, which is contrary to a priori expectations.

Taxes are highly significant in affecting FDI. The coefficient is negative implying that lower taxes attract greater FDI. However it must be noted that the value of the coefficient is quite low.

FDI flows more freely from high income to high income countries. They are also facilitated by the presence of a vibrant stock exchange and credit market in the investor country but are

discouraged by high price levels and oppressive tax regimes in the target country as by the distance of that country from the investor country. The quantum of trade in goods does not matter but the existence of trade and service agreements between target and investor countries does.

6. Policy and other Recommendations

The following appear to be the most obvious policy measures that follow from the study above if the intention is to encourage cross-border equity flows in the CARICOM region:

1. The Central Banks of the region must take steps to develop procedures for recording the inflows, by country of origin, and outflows, by country of destination, of both portfolio and foreign direct investment;
2. There is need to develop all stock markets in the CARICOM region through the listing of more local companies. Both the literature studied and the empirical study show that cross-border flows increase with increasing market capitalization. This may require interventions to lower listing fees. This would have the effect of encouraging cross-listings and more FDI activity in the form of mergers and acquisitions. It may also require interventions at the level of families who own most of the businesses that may be listed;
3. Special efforts must be made to develop the less active exchanges (Suriname, Haiti, Guyana and Belize), including the introduction of electronic trading platforms, since it has been shown that cross-border activity in the region is favoured when the exchanges are at a similar level of sophistication;
4. Development of the financial system is also to be encouraged as both the extant literature and our empirical study verify that this encourages cross-border equity flows;
5. Monetary policy should be geared to keeping inflation rates low and exchange rates stable as this is conducive to cross-border equity flows.
6. Governments of the region should aim at a friendlier tax regime since both the study of the literature and the empirical study show that cross-border flows increase in the presence of lower taxes.

7. Conclusion

CARICOM economies are classified as small developing economies with inadequate savings for capital accumulation. For this reason cross-border equity flows play an important role. The data however show that the majority of FDI comes from the US and Europe and, as for intra-regional FDI, Trinidad and Tobago is the key player. Also, CARICOM stock exchanges have a low number of listed firms, limited IPOs, low secondary trading and limited financial instruments. The large number of family-owned businesses, costs involved in listing, CARICOM citizens not being used to investing in stocks, inadequate regulation, few institutional investors and interlocking directors have all been identified as being responsible for the above characteristics. To improve the levels of cross-border flows CARICOM countries need to improve their macroeconomic performance. Their GDP needs to be increase and central banks must keep inflation in check. Private credit facilities must be expanded and oppressive tax regimes avoided. International trade must also be encouraged and further enhanced through trade agreements. The individual exchanges are too small to make a significant contribution to cross-border portfolio flows. The proper establishment of the CRSE is therefore important.

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Appendix

Table A1: Local and Foreign Companies listed on the JSE, as at December 2009

Company	Local	Foreign	Company	Local	Foreign
Finance			24.Pan Jamaican Investments Trust Limited	√	
1. Bank of Nova Scotia	√		**Manufacturing**		
2.Barita Investments Limited	√		25. Berger Paints (Jamaica) Limited	√	
3. Capital & Credit Financial Group Limited	√		26. Caribbean Cement Company Limited	√	
4.Capital & Credit Merchant Bank Limited	√		27. Desnoes and Geddes Limited	√	
5.First Caribbean International Bank		√	28. Jamaica Broilers Limited	√	
6.First Caribbean International Bank Jamaica	√		29. Kingston Wharves Limited	√	
7.First Jamaica Investments Limited	√		30. Mobay Ice	√	
8.Jamaica Money Market Brokers Limited	√		31. Montego Freeport Limited	√	
9.Jamaica Stock Exchange VP	√		32. Salada Foods Limited	√	
10.Mayberry Investments Limited	√		33. Seprod Limited	√	
11. National Commercial Bank of Jamaica Limited	√		34. Trinidad Cement Limited		√
12. NCB Capital Markets Limited	√		**Other**		
13. Pan Caribbean Financial Services	√		35. J.P.S	√	
14. Scotia DBG Investments Limited	√		36. Jamaica Livestock Association	√	
15. Scotia Group Jamaica	√		37. Kingston Properties Limited	√	
Communications			38. Kingston Wharves Limited	√	
16. Cable and Wireless Jamaica Limited	√		39. Palace Amusement Company Limited	√	
17. Gleaner Company	√		40. Pulse Investments	√	
18. Radio Jamaica Limited	√		41. Supreme Ventures Limited	√	
Insurance			**Retail**		
19. Guardian Holdings Limited		√	42. Carreras Limited	√	
20. Sagicor Life Jamaica Limited	√		43.Hardware and Lumber	√	
Conglomerate			**Tourism**		
21.GraceKennedy Limited	√		44.Ciboney Group Limited	√	
22.Jamaica Producers Group Limited	√		45.Jamaica Pegasus Limited	√	
23.Lascelles, deMercado and Company Limited	√		46.Montego Freeport Limited	√	

Source: The Jamaica Stock Exchange (JSE)

Table A2: Local and foreign companies listed on the TTSE, as at December 2009

Company	Local	Foreign	Company	Local	Foreign
Banking			20.Trinidad Cement Limited	√	
1.BCB Holdings Limited		√	**Trading**		
2.Firts Caribbean International Bank Limited		√	21.Agostini's Limited	√	
3.National Commercial Bank Jamaica Limited		√	22.Prestige Holdings Limited	√	
4. Republic Bank Limited	√		23.Supreme Ventures Limited		√
5.Scotiabank Trinidad and Tobago Limited	√		24.Williams LJ B	√	
Conglomerates			25. ANSA Merchant Bank Limited	√	
6.ANSA Mc AL Limited	√		26.Capital and Credit Financial Group Limited		√
7.Barbados Shipping and Trading Company Limited		√	27.Guardian Holdings Limited	√	
8.GraceKennedy Limited		√	28.Jamaica Money Market Brokers Limited		√
9.Neal & Massy Holdings Limited	√		29.National Enterprises Limited	√	
Property			30.Sagicor Financial Corporation		√
10.Point Lisas Industrial Port Development Corporation Limited	√		31.Scotia DGB Investments Limited		√
Manufacturing			**Non-Sector**		
11.Angostura Holdings Limited (SUSPENDED)	√		32.Alstons Limited	√	
12.National Flour Mills Limited	√		33.Capital and Credit Merchant Bank Limited		√
13.One Caribbean Media Limited	√		**Second-Tier**		
14.The West Indian Tobacco Company Limited	√		34.FNCU Venture Capital Company Limited	√	
15.Trinidad Publishing Company Limited	√		35.Mora Ven Holdings Limited	√	
16.Unilever Caribbean Limited	√		**Mutual-Fund**		
17.Berger Paints Trinidad Limited	√		36.Fortress Caribbean Property Fund		√
18.Flavourite Foods	√		37.Praetorian Property Mutual Fund	√	
19.Ready Mix West Indies Limited	√		38. Savinvest India Asia Fund	√	

Source: The Trinidad and Tobago Stock Exchange (TTSE)

Table A3: Local and foreign companies listed on the BSE, as at December 2009

Company	Local	Foreign	Company	Local	Foreign
Banking			14.The West India Biscuit Company Limited	√	
1. Barbados National Bank	√		15.West Indies Rum Distillery Limited	√	
2.FirstCaribbean International Bank	√		**Mutual Funds**		
Conglomerate			16.Fortress Caribbean Property Fund	√	
3. ANSA McAL (Barbados) Limited	√		17. Barbados Farms Limited	√	
4. Banks Holdings Ltd.	√		18.One Caribbean Media	√	
5. Barbados Shipping & Trading Co. Ltd.	√		19.Jamaica Money Market Brokers		√
6.Goddard Enterprises Ltd	√		**Tourism**		
7.Grace Kennedy Limited		√	20.Almond Resorts Inc.	√	
8.Neal & Massy Holdings Limited		√	**Trading**		
9.Trinidad Cement Limited		√	21. Cave Shepherd & Co. Ltd.	√	
Insurance			22.Courts(Barbados) Ltd.	√	
10.Insurance Corporation of Barbados Limited	√		**Utilities**		
11.Sagicor Financial Corporation	√		23.Cable & Wireless Barbados Ltd.	√	
Manufacturing			24.Light & Power Holdings Limited	√	
12.Barbados Dairy Industries Limited	√		**Other**		
13.Bico Limited	√		25.Sunbeach Communications	√	

Source: The Barbados Stock Exchange

Table A4: Local and Foreign companies listed on the ECSE, as at December 2009

Company	Local	Foreign	Company	Local	Foreign
Finance			9.Cable & Wireless St. Kitts & Nevis	√	
1.First Caribbean International Bank Ltd		√	**Conglomerate**		
2.Republic Bank (Grenada) Limited	√		10.Grace Kennedy Limited		√
3.The Bank of Nevis Ltd	√		11.S. L. Horsford and Company Ltd	√	
4.St. Kitts Nevis Anguilla National Bank Ltd	√		12.St Kitts Nevis Anguilla Trading and Development Company Ltd	√	
5. 12.East Caribbean Financial Holding Co. Ltd (Holding Company for Bank of St. Lucia)	√		**Property**		
Utilities			13.Grenreal Property Corporation Limited	√	
6.Dominica Electricity Services Ltd	√		**Manufacturing**		
7.Grenada Electricity Services Limited	√		14.Trinidad Cement Ltd		√
8.St. Lucia Electricity Services Ltd	√				

Source: The Eastern Caribbean Stock Exchange

Table A5: Local and foreign companies listed on the Bahamas International Securities Exchange as at December 2009

Company	Local	Foreign	Company	Local	Foreign
Banking			10.Cable Bahamas limited	√	
1. Fidelity Bank (Bahamas) Limited	√		**Health care**		
2.Commonwealth Bank Limited Banking	√		11. Doctors Hospital Health System Limited	√	
3.First Caribbean International Bank		√	**Insurance**		
4.Finance Corporation of the Bahamas	√		12. FAMGUARD Corporation Limited	√	
5.Bank of The Bahamas Limited	√		13. Colina Holdings Limited	√	
Investment			14. JS Johnson and Company Limited	√	
6. Benchmark (Bahamas) Limited	√		**Industrial**		
Property			15.Freeport Oil Holdings Company Limited	√	
7. Bahamas Property Fund Limited	√		16.ICD Utilities Limited	√	
8. Premier Commercial Real Estate Investment Company Limited	√		17.Freeport Concrete Company Limited	√	
Waste Collection			18.Consolidated Water Company Limited		√
9.Bahamas Waste Limited	√		**Retail**		
Communications			19.AML Foods Limited	√	

Source: The Bahamas International Securities Exchange

Table A6: Local and Foreign companies on the official and secondary list of the GASCI, as at December 2009

Company	Local	Foreign	Company	Local	Foreign
Finance	√		**Manufacturing**		
1.Republic Bank Guyana Limited	√		8.Caribbean Container Inc	√	
2.Guyana Bank for Trade and Industry	√		9.Demerara Tobacco Company Limited	√	
3.Citizens Bank Guyana Inc	√		10. Guyana Stockfeeds Incorporated	√	
4.Banks DIH Limited	√		11.Sterling Products Limited	√	
5.Demerara Bank Limited			12.Demerara Distillers Limited		
6.Globe Trust & Investment Company Limited	√		13.Trinidad Cement Limited (Secondary List)		√
Retail			**Property**		
7.J.P. Santos & Company Limited	√		14.Property Holdings Incorporated	√	

Source: The Guyana Association of Securities Companies and Intermediaries (GASCI)

Table A7 CARICOM Country Rankings by Inward FDI Performance Index, Inward FDI Potential Index and Outward FDI Performance Index, 2004-2007

	Inward FDI Performance Index				Inward FDI Potential Index				Outward FDI Performance Index			
Country	2004	2005	2006	2007	2004	2005	2006	2007	2004	2005	2006	2007
Bahamas		8	8	5	51	38	50					
Guyana	40	33	20	11	101	104	109		98	109	106	
Haiti	135	131	107	105	139	139	140					
Jamaica	137	20	23	26	93	90	92		43	65	124	124
Suriname	140	140	140	141	95	81	81					
T and T	15	22	36	54	48	46	45		35	33	36	36

Source: UNCTAD, World Investment Report 2007 and 2008

Table A8 CARICOM Greenfield Investments by destination, 2002-2008

	2002	2003	2004	2005	2006	2007	2008
World	5 703	9 469	10 254	10 632	12 441	11 703	3 107
CARICOM	2	3	6	3	6	6	3
Bahamas	0	2	2	1	1	2	1
Barbados	0	0	0	0	0	1	0
Guyana	0	1	0	0	0	0	0
Jamaica	1	0	4	0	4	1	2
St. Lucia	0	0	0	1	0	0	0
Suriname	0	0	0	0	0	0	0
T and T	1	0	0	1	1	2	0

Source: UNCTAD, World Investment Report 2007, 2008, 2009.

Table A9: CARICOM Number of Greenfield Investments by source, 2002-2008

	2002	2003	2004	2005	2006	2007	2008
World	5703	9 469	10 254	10 632	12 441	11 703	3 107
Caribbean	13	14	9	15	12	9	1
Bahamas	2	3	1	2	0	1	0
Barbados	2	0	1	0	0	0	0
Guyana	0	0	1	3	3	1	1
Haiti	1	0	0	2	2	0	0
Jamaica	3	5	4	2	2	2	0
St. Lucia	0	1	0	0	0	1	0
Suriname	1	2	0	0	0	0	0
T and T	4	3	2	6	5	4	0

Source: UNCTAD, World Investment Report 2007, 2008, 2009

Table A10: CARICOM Mergers and acquisitions (US million) sales, 2002-2006

Region	2002	2003	2004	2005	2006
World	369788.6	296987.6	380598.3	716301.7	880456.7
Developed	322742.4	245840.8	317431.2	604882.5	727954.9
Developing	44169.7	38751.96	53120.03	94101.33	127371.8
CARICOM	1096.64	232.772	425.243	63.693	4165.496
Antigua and Barbuda	0	46.981	40	63.693	89.781
Bahamas	28.44	54.544	4.273	0	3077.063
Barbados	814.199	44.447	33.27	0	998.652
Guyana	0.00001	0.3	0	0	0
Jamaica	214	0	324	0	0
St. Lucia	0	0	5.7	0	0
Trinidad and Tobago	40	86.5	18	0	0

Table A11: CARICOM Mergers and acquisitions (US million) Purchases, 2002-2006

Region	2002	2003	2004	2005	2006
World	369788.6	296987.6	380598.3	716301.7	880456.7
Developed	343298.6	257363.4	341682.2	627064	752481.7
Developing	25799.32	30631.86	37925.41	82425.76	122940.7
CARICOM	715.15	825	810	166.66	539.65
Bahamas	44.15	825	810	8.50	188.90
Barbados	671	0	0	107.6	0
Jamaica	0	0	0	0.56	195.55
Trinidad and Tobago	0	0	0	0	155.20

Source: UNCTAD, FDI database