CGCED

CARIBBEAN GROUP FOR COOPERATION IN ECONOMIC DEVELOPMENT

THE IMPORTANCE OF FINANCIAL AND INSURANCE MARKET INTEGRATION IN THE CONTEXT OF HIGH CONSUMPTION VOLATILITY IN CGCED COUNTRIES

DISCUSSION
DRAFT

Caribbean Country Management Unit
Latin America and the Caribbean Region
The World Bank

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PREFACE

The Importance of Financial and Insurance Market Integration in the Context of High Consumption Volatility in CGCED Countries was prepared for the meeting of the Caribbean Group for Cooperation in Economic Development (CGCED) which will take place June 12 – 15, 2000. This paper examines international risk- sharing among Caribbean countries. The paper also shows the gains CGCED countries have made in integrating their economies into international markets. Furthermore, the paper develops possible policy recommendations for the countries.

The team preparing this report was comprised of Philippe Auffret (Task Manager), LCCDO, Jacqueline Mora-Baez, LCCDO, and John Pollner, LCSFF. It draws on a recent paper by Philippe Auffret and Jacqueline Mora-Báez, *Absence of Optimal Risk Sharing: Large Cost for Developing Economies, Huge Cost for Caribbean Countries and Small States*, and a note, *The Financial Markets of the Caribbean, Assuring Stability, Access to Efficiency for Mitigating Financial and Economic Risks*, by John Pollner. Orsalia Kalantzopoulos is the director of the Caribbean Country Management Unit. The views expressed within are the authors' and do not necessarily reflect those of the World Bank, its Executive Directors, or the countries they represent. We want to thank Kevin Tomlinson, LCC3C, for his contribution to the paper.

LIST OF ACRONYMS

CARICOM	Caribbean Community Secretariat
CGCED	Caribbean Group for Cooperation in Economic Development
DOD	Debt Outstanding and Disbursed
GDP	Gross Domestic Product
GNP	Gross National Product
IMF	International Monetary Fund
M2	Money + Quasi Money
OECD	Organization for Economic Cooperation and Development
PWT	Penn World Tables
SIMA	Statistical Information Management and Analysis
XGNFS	Exports of Goods and Nonfactor Services

EXECUTIVE SUMMARY

High consumption volatility and smallness are two important characteristics of Caribbean countries. Consumption volatility in the Caribbean region stands far above that of other regions of the world like Latin America, Asia, non-OECD Europe and sub-Saharan Africa. In all regions, including the Caribbean, private consumption volatility is higher than that of total consumption, thus indicating that governments play some positive role in reducing consumption volatility or smoothing consumption.

This volatility in consumption has huge economic costs for all developing countries, especially so for the Caribbean countries. Consequently, countries are willing to pay substantial amounts in terms of reduction in consumption growth to eliminate unpredictable consumption variability. In fact, the Caribbean region is willing to have on average, a consumption growth of 0.18 percent instead of 0.42 percent in exchange for having a lower consumption variability.

The underlying factors that help explain variability in consumption across countries and regions are related to: size, depth of both financial and insurance markets, and level of development. A regression analysis clearly establishes an inverse relationship between consumption volatility and size, depth of both financial and insurance markets, and level of economic development. Incidentally, Caribbean countries are also penalized by their small size.

Caribbean countries would benefit enormously from regional and international integration. There is indeed substantial evidence that Caribbean countries do not share risk optimally, neither within the Caribbean region nor with the rest of the world. Because of the lack of risk sharing, the welfare of individuals living in these countries is lower than would be attainable if their economies were more integrated with the rest of the world. Moreover, considerable gains could be made through diversification within the Caribbean region.

Financial systems in the Caribbean region are relatively well developed compared to neighboring countries, and insurance penetration in these economies is also high. However, much remains to be done to foster the development of both financial and insurance markets, especially in the areas of regulation and financial market deepening.

I. CHARACTERISTICS OF CARIBBEAN COUNTRIES

I.I Caribbean Countries Are Small

In terms of population, Caribbean countries are small. In this paper we consider a large cross section of 122 countries for which annual data on per capita GDP and per capita consumption adjusted for differences in purchasing power parity is available. Of these, 17 are small states defined as having an average population, over the period 1960-1997, of less than one million. These countries range in size from tiny St. Kitts and Nevis with a population of 41,000, to Swaziland with a population of 984,000. Of the 17 small states considered, 10 are Caribbean countries. Of the larger set of 212 states and territories listed in the World Bank's databases, 55 have a population of less than one million, of which 11 are Caribbean countries .

I.II Consumption Is Very Volatile in Caribbean Economies

Though individuals prefer to consume more goods and services than less, risk averse individuals are concerned not only about consumption levels, but also consumption variability. Indeed, individuals prefer a smooth consumption path to one that fluctuates. For example, an individual whose revenues are $150 this year and $50 next year would rather consume $100 this year and $100 next year than consume $150 this year and $50 the next. Consequently, the individual would want to transfer $50 of future income to the present; this is what financial and insurance markets allow the person to do.

As Table 1 shows, consumption volatility (as measured by standard deviation of consumption growth) in the Caribbean region stands far above that of other regions. From 1960 to 1997 consumption volatility has been 5.0 percent in the Caribbean region compared to 2.4 percent in Asia, 2.6 percent in non-OCDE Europe and Central Africa region, 3.7 percent in the Middle-East and North Africa, 2.7 percent in Latin America, and 3.9 percent in sub-Saharan Africa. Comparable data in the OECD countries stands at 1.3 percent.

Table 1

Consumption Volatility
For Selected Countries

Countries/ Regions 1/	Population (in 000's) 1997	Standard Deviation (percentage)	
		Private Consumption	Total Consumption
World		**1.13**	**0.86**
Asia	**2,968,112**	**2.74**	**2.44**
Middle East North Africa	**217,260**	**3.91**	**3.74**
OECD	**805,436**	**1.48**	**1.25**
Germany	66,289	1.90	1.73
Japan	125,857	2.71	2.47
United States	267,640	1.78	1.57
Latin America	**455,064**	**3.15**	**2.74**
Argentina	35,452	5.70	6.16
Brazil	165,105	4.66	4.26
Chile	14,680	12.77	9.92
Europe and Central Asia (non OECD)	**138,904**	**2.80**	**2.64**
Caribbean Region 2/	**21,896**	**5.49**	**4.97**
Bahamas	289	13.13	11.94
Barbados	265	7.12	6.13
Belize	229	18.08	13.47
Dominica	74	7.46	5.51
Dominican Republic	8,018	7.82	7.17
Grenada	93	9.66	7.30
Guyana	851	14.98	14.85
Haiti	7,496	4.19	5.52
Jamaica	2,502	8.46	6.98
St. Kitts and Nevis	41	17.67	9.95
St. Lucia	159	14.64	11.32
St. Vincent and the Grenadines	112	11.74	8.34
Suriname	450	18.01	13.99
Trinidad and Tobago	1,315	11.55	10.43
Sub-Saharan Africa	**571,841**	**4.26**	**3.85**

Source: Calculated using annual data 1960 – 1997 from updated PWT 5.6
1/ Regions are weighted averages.
2/ Antigua and Barbuda is not included due to data unavailability.

Consumption variability also varies widely across countries within a region. While the Bahamas, Belize, Guyana, St. Lucia, Suriname, and Trinidad and Tobago all have a consumption volatility above 10 percent, Barbados, Dominica and Haiti have volatilities below 6 percent.

Table 1 clearly shows that the volatility of private consumption is higher than that of total consumption. This result is very robust since it is observed across all regions and all countries with little exception. This result may indicate that governments play some positive role in reducing consumption volatility or smoothing consumption by providing more public goods at times when private consumption tends to be low. In Caribbean countries, the dispersion of total consumption is 5.0 percent while that of private consumption stands at 5.5 percent. The counter cyclical role of public consumption also varies across countries. For example, public consumption is very effective in reducing private consumption volatility in St. Kitts and Nevis while, in the case of Guyana, one of the most volatile economies, public consumption does not seem to be as efficient.

I.III Volatility in Consumption Has Enormous Economic Costs

We have shown that Caribbean countries have consumption paths which are extremely volatile. This consumption volatility has some welfare costs. Indeed an individual would be willing to pay to modify her revenue path from $50 this year and $150 next year to $100 this year and $100 next year in an effort to smooth consumption. We measure this premium by calculating how much consumption growth each individual is ready to forgive (on a sustainable basis) to decrease his or her variability in consumption.

Table 2 shows consumption growth rates and cost of consumption variability for a large number of countries. Most developing economies are willing to pay substantial amounts in terms of reduction in consumption growth to eliminate unpredictable consumption variability. As Table 2 indicates, the Caribbean region is willing to give away an astonishing 0.24 percent of consumption growth on a sustainable basis (this is to have on average a consumption growth of 0.18 percent instead of 0.42 percent) to lower consumption volatility. This cost varies across countries within the region, ranging from 0.30 percent in Haiti to 2.20 percent in Guyana. On the contrary, the costs of consumption variability are of very low importance to representative individuals in developed economies. For example, the OECD region is willing to give away only 0.01 percent of consumption growth (this is to have on average a consumption growth of 1.93 percent instead of 1.94 percent) in order to lower consumption volatility.

Table 2
Cost of Consumption Volatility
(as a perpetual decrease in consumption growth)

Countries/ Regions 1/	Consumption	
	Average growth rate	Cost
World	**2.09**	**-**
ASIA	**3.09**	**0.05**
Middle East North Africa	**1.24**	**0.13**
OECD	**1.94**	**0.01**
Germany	2.52	0.02
Japan	4.10	0.05
United States	1.88	0.02
Latin America	**1.73**	**0.07**
Argentina	1.13	0.37
Brazil	2.42	0.17
Chile	1.85	0.98
Europe and Central Asia (non OECD)	**2.31**	**0.06**
Caribbean Region 2/	**0.42**	**0.24**
Bahamas	5.81	1.42
Barbados	2.98	0.37
Belize	0.02	1.81
Dominica	2.22	0.30
Dominican Republic	1.65	0.51
Grenada	4.86	0.53
Guyana	-1.05	2.20
Haiti	-0.21	0.30
Jamaica	1.82	0.48
St. Kitts and Nevis	4.73	0.98
St. Lucia	3.14	1.27
St. Vincent and the Grenadines	2.16	0.69
Suriname	-0.54	1.95
Trinidad and Tobago	1.22	1.08
Sub-Saharan Africa	**-0.27**	**0.14**

Source: Calculated using annual data 1960 – 1997 from updated PWT 5.6
1/ Regions are weighted averages.
2/ Antigua and Barbuda is not included due to data unavailability

II. FACTORS THAT ACCOUNT FOR HIGHER CONSUMPTION VOLATILITY IN CARIBBEAN ECONOMIES

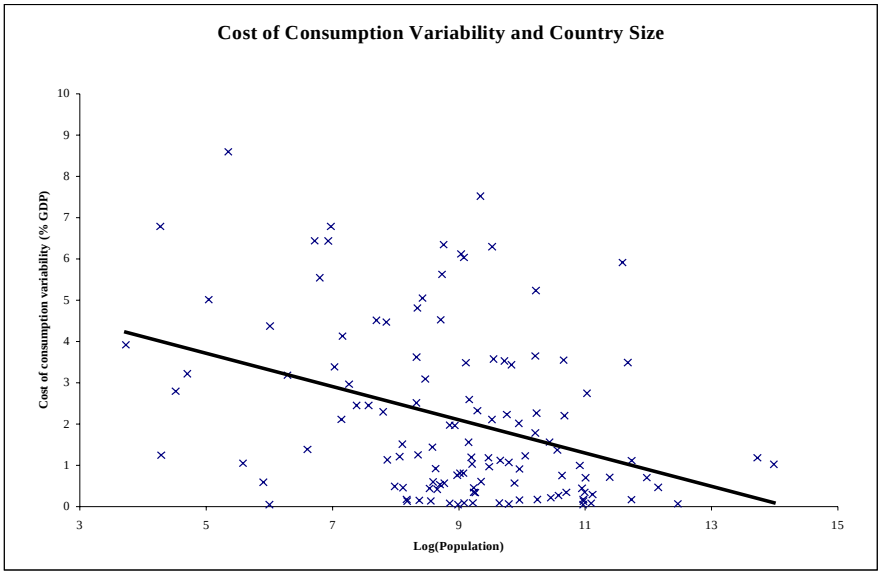
Having shown that consumption volatility is high in Caribbean countries and that this volatility has enormous economic costs, the next step consists of determining the underlying factors which help explain the variability in consumption across countries and regions.

II.I Some Intuition

We can identify at least four factors that help explain the differences in consumption volatility across countries: country size, depths of financial and insurance markets, and level of economic development.

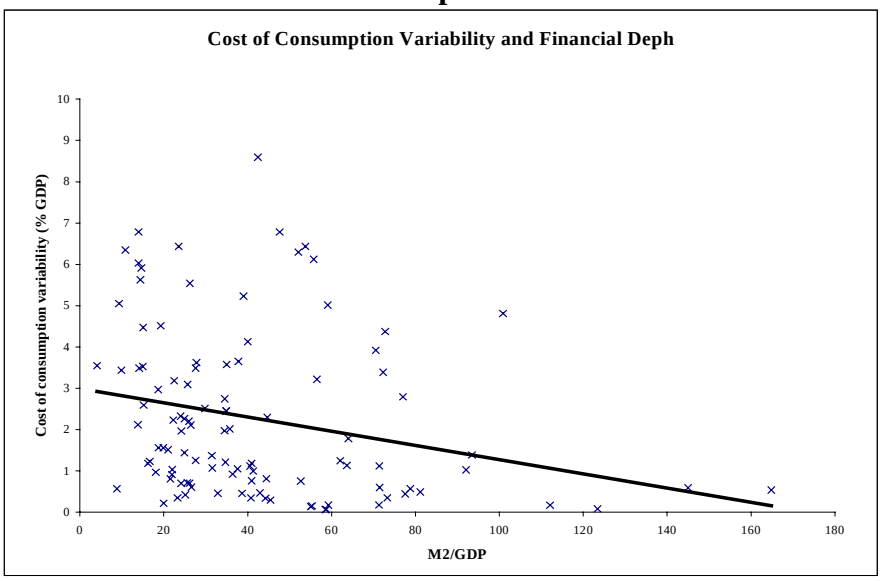
Small size. Consider a country with only one individual. If this individual's revenues are $50 this year and $150 next year, he or she will have to consume $50 this year and $150 next year. However, if there is another individual whose revenues are $150 this year and $50 next year then aggregate consumption will be $200 this year and $200 next year, independent of the existence of risk sharing arrangement. Indeed, in the extreme case where there is no storage capacity or risk sharing arrangement, each individual would consume his or her production at each period. Consequently, consumption variability at the individual level would be high while average per-capita consumption would remain $100 in both periods. As a result, one would expect per-capita consumption variability and consequently the cost of consumption variability to be a decreasing function of the size of the country. This is because the larger the number of individuals the more they are able to diversify risks among themselves . Graph 1 seems to indicate that there is indeed some relation between cost of consumption variability and population.

Graph 1

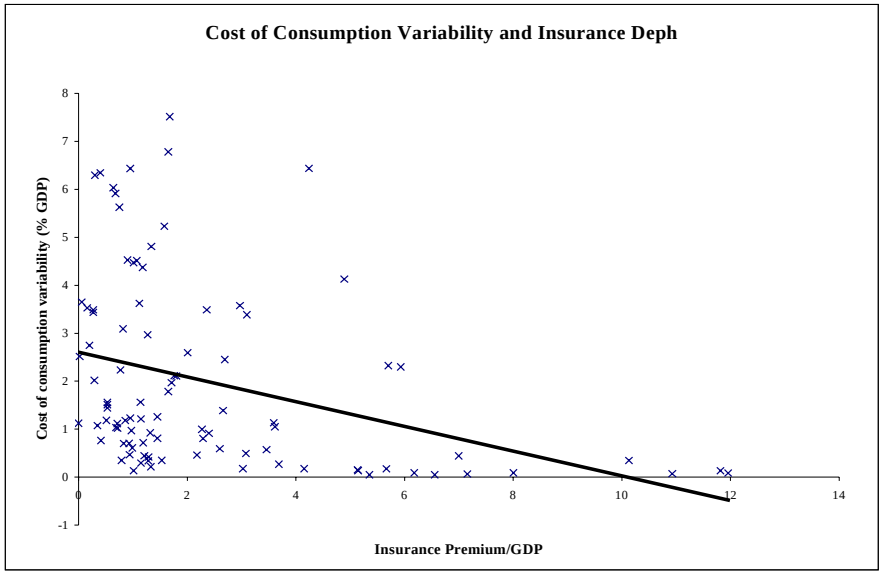


Depths of financial and insurance markets. We also expect consumption variability to be a decreasing function of the levels of development of both financial and insurance markets. Insurance allows individuals to ensure a certain level of consumption despite adverse market conditions, and is the classical form of consumption smoothing. Financial markets play a similar role since they permit individuals to transfer consumption over time. Indeed, in the above example, an individual whose revenues are $50 this year and $150 next year, would be able to borrow $50 against future revenues to smooth consumption. Graphs 2 and 3 confirm this intuition: consumption variability seems to decrease as financial and insurance markets deepen.

Graph 2

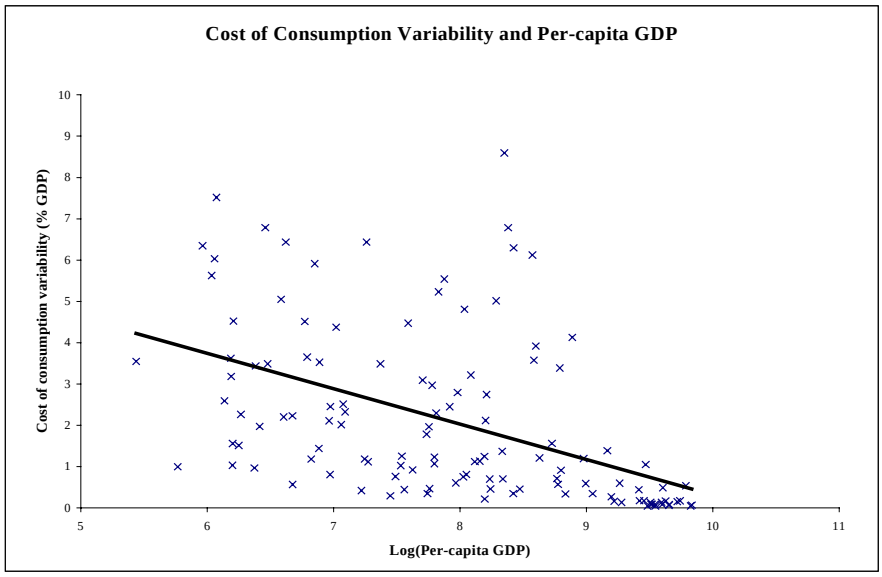


Graph 3



Level of economic development. The more developed a country, the better able individuals are to smooth their consumption path. This is because financial and insurance markets become more complete as the economy develops. Consequently, we expect an inverse relationship between the cost of consumption variability and the level of economic development. Graphs 4 confirms this intuition.

Graph 4



II.II A Simple Regression

These implications are tested empirically by regressing the cost of consumption variability on population, indicators of financial and insurance depths, and per-capita GDP. The coefficients are estimated for a group of 83 countries including 10 Caribbean countries, using a Two-Stage Least Square procedure to avoid multicollinearity among explanatory variables (Table 3). Monetary aggregate M2 (as percentage of GDP) and paid insurance premium (as percentage of GDP) are used as proxies for financial and insurance depths respectively. Per-capita GDP is used as a proxy for the level of economic development.

Table 3
Determinants of the Cost of Consumption Volatility

Exogenous Variables	**Dependent Variable Cost**
Constant	6.51 (6.22)
Financial depth	-0.020 (-2.93)
Insurance depth[1]	-0.19 (-2.17)
Per capita GDP [2]	-0.00017 (-2.85)
Log(Population)	-0.39 (-3.8)
Number of countries	83
R-square	0.30
Adjusted R-square	0.26
DW	1.7

Note: t-statistics given in parenthesis.
1/ Residual of insurance depth regressed on financial depth.
2/Residual of per-capita GDP regressed on financial depth and the insurance depth residual.

Table 3 shows that the coefficients on each explanatory variable have the expected negative signs and are all highly significant. The regression confirms our previous intuition and establishes a clear inverse relationship between consumption volatility and country size, depths of both financial and insurance markets and level of economic development. Incidentally, Caribbean countries are also penalized by their small size.

We proceed in two steps. First, we show that Caribbean countries do not diversify risk optimally both regionally and internationally. Second, we show that Caribbean countries would benefit enormously from having their insurance and financial markets integrated within the region and with the rest of the world.

III. REGIONAL AND INTERNATIONAL INTEGRATION WOULD INCREASE WELFARE IN CARIBBEAN COUNTRIES

III.I Caribbean Countries Do Not Diversify Risk Optimally Within the Region and With the Rest of the World

Economic theory tells us that if Caribbean countries were diversifying risk optimally then: (i) consumption growth should be perfectly correlated across countries; (ii) consumption growth should be perfectly correlated with world consumption growth; and (iii) consumption growth should depend only on world consumption growth and be independent of production growth.

(i) Is consumption growth perfectly correlated across countries? If Caribbean countries were sharing risk optimally, correlation coefficients between any pair of countries should be equal to one. Table 4 shows the correlation coefficients between consumption growth for a large number of Caribbean countries, the United States and the United Kingdom. These last two countries have been added because they have close ties with the Caribbean regions. Indeed, the United States has intensive economic relations with Caribbean countries due in part to its physical proximity and the United Kingdom keeps close economic ties with the region for historical reasons.

Table 4
Consumption Growth
Correlation Matrix for Caribbean Countries [1/], United States and The United Kingdom
1960-1997 [2/]

	Bahamas	Barbados	Belize	Dominica	Dominican Republic	Grenada	Guyana	Haiti	Jamaica	St. Kitts and Nevis	St. Lucia	St. Vincent and the Grenadines	Suriname	Trinidad and Tobago	Caribbean Region	United Kingdom	United States
Bahamas	-	0.2	-0.1	0.5	-0.5	0.0	-0.4	0.0	-0.2	-0.1	0.6	0.2	-0.1	-0.2	-0.4	0.4	0.4
Barbados		-	0.3	0.2	-0.2	0.5	0.1	-0.3	0.2	0.1	0.7	0.3	-0.2	0.0	-0.2	0.1	0.1
Belize			-	0.0	0.4	0.3	-0.1	-0.3	0.4	-0.2	0.0	0.6	-0.3	-0.2	0.0	0.0	-0.4
Dominica				-	-0.1	0.0	-0.2	0.0	-0.2	-0.1	0.5	0.0	-0.1	-0.3	-0.2	0.2	0.2
Dominican Republic					-	0.2	0.0	0.1	0.2	-0.3	-0.3	0.3	-0.1	0.2	0.7	0.0	0.0
Grenada						-	-0.2	0.3	0.0	0.3	0.3	0.4	-0.5	0.0	0.0	0.2	0.1
Guyana							-	0.1	0.1	-0.3	-0.3	-0.3	0.4	0.2	0.3	0.0	0.2
Haiti								-	0.0	0.8	0.1	-0.1	0.2	0.3	0.4	-0.2	0.0
Jamaica									-	-0.2	-0.1	-0.1	-0.2	-0.2	0.3	0.0	0.1
St. Kitts and Nevis										-	0.3	0.0	-0.6	0.2	-0.1	-0.1	-0.1
St. Lucia											-	-0.1	-0.5	-0.4	-0.5	-0.1	0.1
St. Vincent and the Grenadines												-	-0.4	0.2	0.3	0.1	-0.3
Suriname													-	0.2	0.3	-0.2	0.2
Trinidad and Tobago														-	0.7	-0.2	-0.2
Caribbean Region															-	-0.1	-0.1
United Kingdom																-	0.5
United States																	-

Note: Bold Numbers are those with a consumption correlation greater than zero. Shaded cells are those with positive consumption correlation and consumption correlation greater than output correlation.
1/ Antigua and Barbuda is not included due to non data availability.
2/ Availability of data varies across countries. See Annex 1.a.

Table 4 shows that correlation coefficients between consumption growth rates across countries are low and definitely do not equal one. For example, the coefficient correlation between Jamaica's and the Dominican Republic's consumption growth is only 0.2! This is initial evidence that Caribbean countries do not share risk optimally both within the region and with the United States or the United Kingdom.

(ii) Is consumption growth perfectly correlated with world consumption growth? Table 5 gives further evidence of the lack of risk sharing arrangements. Indeed, if Caribbean countries were diversifying risk optimally, then the correlation coefficients between any country specific consumption growth and world consumption growth should be equal to one. Table 5 clearly shows that these correlation coefficients are very different from one for all Caribbean countries.

Table 5
Correlation Coefficients Between
Country Specific and World Consumption Growth Rate

Countries/ Regions	Correlation Coefficient
OECD	**0.8**
Canada	0.7
France	0.4
Germany	0.6
Italy	0.4
Japan	0.5
United Kingdom	0.6
United States	0.8
Caribbean Region 1/	**0.1**
Bahamas	0.6
Barbados	0.0
Belize	-0.2
Dominica	0.6
Dominican Republic	0.2
Grenada	0.1
Guyana	0.2
Haiti	0.1
Jamaica	-0.1
St. Kitts and Nevis	-0.2
St. Lucia	0.1
St. Vincent and the Grenadines	-0.2
Suriname	0.1
Trinidad and Tobago	-0.0

Source: Extended version of PWT 5.6
Note: Regional and consumption are weighted averages.
1/ Antigua and Barbuda is not included due to data unavailability.

(iii) Does consumption growth depend on world consumption growth only? Is it independent of production growth? In Table 6 we regress a country's consumption growth rate on world consumption growth rate and the country's income growth rate. If risk sharing is complete, coefficients on world consumption growth rate should be one (β_2) while coefficients on a country's income growth rate should be zero (β_1). Table 6 shows that coefficients on world consumption growth rates are not only different from one, but also negative for a majority of countries . Also, coefficients on a country's specific income growth rate are clearly different from zero and not significantly different from one in most cases.

Table 6
Regressions of Country-Specific Consumption Growth Rate
on World Consumption Growth Rate and Country-Specific Output Growth Rate

$$\Delta LogC_{it} = \alpha + \beta_1 \cdot \Delta LogCw_t + \beta_2 \cdot \Delta LogY_{it} + \varepsilon_{it}$$

	Barbados	Dominican Republic	Guyana	Haiti	Jamaica	Suriname	Trinidad and Tobago	United Kingdom	United States	Pooled
β_1	-1.2	-0.5	0.9	-0.0	-0.2	-1.1	0.0	1.4	2.1	-0.1
t-statistics	(2.0)	(-0.8)	(1.6)	(-0.0)	(-0.4)	(-1.8)	(0.1)	(2.5)	(3.6)	(-1.0)
β_2	1.4	1.2	1.2	0.8	1.6	1.4	0.7	1.2	1.4	1.0
t-statistics	(6.0)	(8.2)	(19.6)	(5.9)	(9.4)	(17.7)	(1.6)	(7.0)	(12.5)	(34.5)
F-Statistic										643.74

Notes: 1. Data are pooled for 122 countries in PWT 5.6 for 1970 to 1994 (2,982 observations). Corrected for Heteroskedasticity
2. Bahamas, Belize, Dominica, Grenada, St. Kitts and Nevi, St. Lucia, and St. Vincent are not included due to insufficient statistical information.

The previous results invalidate the full insurance model. They provide clear evidence that Caribbean countries do not diversify risk optimally within the region and with the rest of the world.

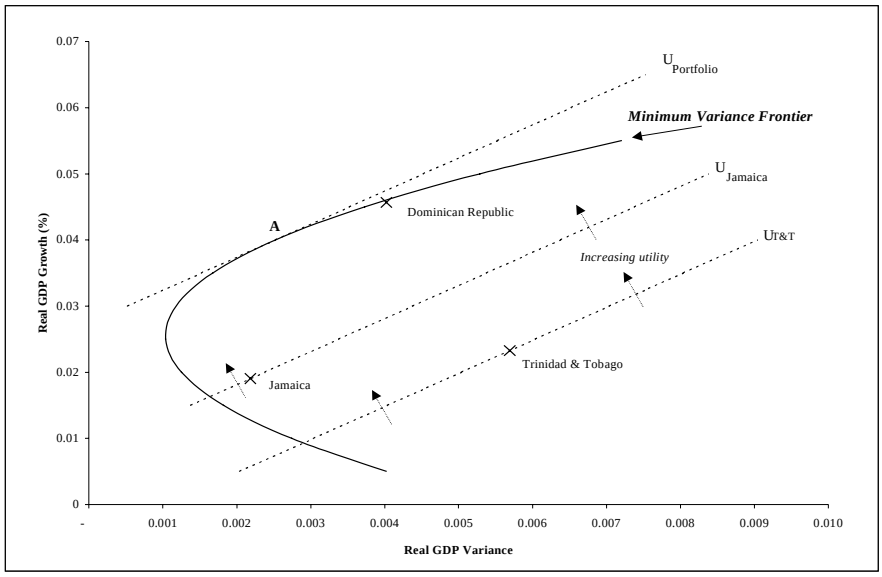
III.II Caribbean Countries Would Benefit Enormously From Regional and International Integration

In this section, we explore a world economy in which the only risky assets traded are claims to countries' uncertain output or equivalent shares of stock in national economies . If we assume that country growth is a good proxy for the performance of the firms located in that country, these securities are much like those traded in the real world. We ask the following question, "If claims to country specific output or GDP-linked securities were traded, how big would the gains be in terms of portfolio output?"

Graph 5 shows average and variance of annual GDP growth in the Dominican Republic, Jamaica and Trinidad & Tobago. Indifference curve U represents the combinations of growth and variance which keep individuals at a given level of utility (economic agents prefer higher returns (i.e. growth), and lower risk (i.e. variance)). Indifference curves are represented in Graph 5. Consequently, an individual who lives in Trinidad & Tobago and can only hold the GDP-linked securities of Trinidad & Tobago will choose to hold Trinidad & Tobago GDP-linked security and get level of utility $U_{T\&T}$. Similarly, an individual who lives in Jamaica will hold exclusively the GDP-linked security of Jamaica and get utility $U_{Jamaica}$.

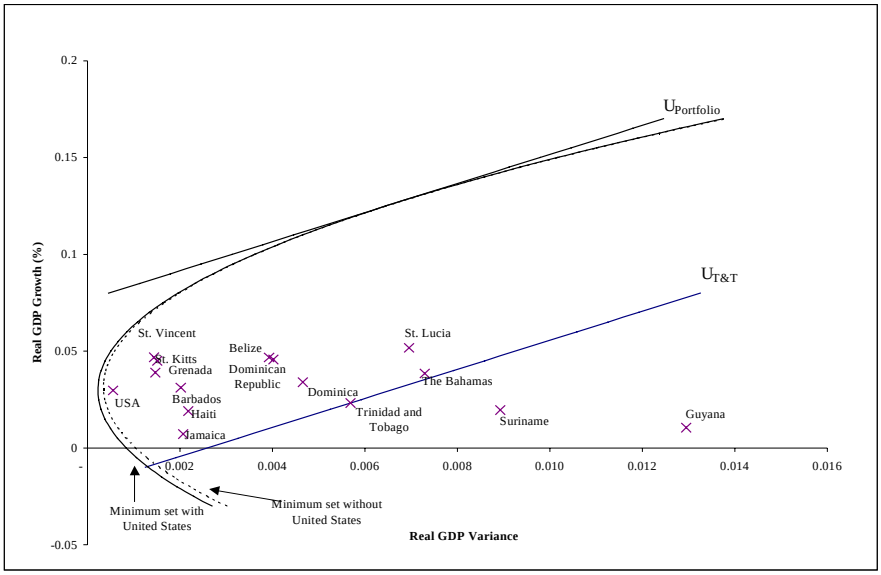
Let's assume now that individuals can hold the GDP-linked securities of any of the three countries. Can these individuals increase their utility levels by holding a portfolio constituted of these three securities? To examine this question, we borrow from portfolio theory and build the minimum variance frontier. This frontier corresponds to portfolios (combinations of singles securities) that, given a particular level of standard deviation (risk), have the highest attainable expected rate of return. Through portfolio diversification, i.e. by investing in all three GDP-linked securities, individuals can reach utility levels $U_{Portfolio}$. Consequently, individuals of all countries benefit from investing in other countries' securities. For example, a person who invests exclusively in Jamaica can expect to get a rate of return of 2 percent with a standard deviation of 4.6 percent, while portfolio diversification would allow him to expect a return of 4 percent (point A of the graph) at approximately the same level of risk.

Graph 5



Graph 6 underlines the benefits of diversification within the Caribbean region. Graph 6 shows two minimum variance frontiers: that which corresponds to portfolios constituted of the GDP-linked securities of the fourteen Caribbean countries and that which corresponds to the same fourteen securities plus that of the United States. Here again, individuals do benefit considerably from investing in all GDP-linked securities allowing them to attain utility levels $U_{Portfolio}$. Also, the inclusion of the US GDP-linked security expands the minimum variance frontier, although not significantly, which indicates that most diversification gains can be made through diversification within the Caribbean region.

Graph 6


0.2
0.15
0.1
0.05
0
-
-0.05
Real GDP Growth (%)
$U_{Portfolio}$
$U_{T\&T}$
St. Vincent
St. Kitts
Grenada
Belize
Dominican Republic
Dominica
St. Lucia
The Bahamas
USA
Barbados
Haiti
Jamaica
Trinidad and Tobago
Suriname
Guyana
0.002
0.004
0.006
0.008
0.010
0.012
0.014
0.016
Minimum set with United States
Minimum set without United States
Real GDP Variance

IV. Policy Recommendations

The existence of well developed financial and insurance markets is of critical importance for Caribbean countries to smooth consumption. Financial systems in the Caribbean area are relatively well developed compared to neighboring countries. Monetary aggregate M2 as percentage of GDP stands at 51 percent in comparison to the Latin America average of 30 percent (Table 7). The development of banking industry is high, in part due to the influence of the tourist trade and remittances from abroad. Also, the larger Caribbean economies have open capital accounts which help foster stronger integrated markets and opportunities for increased investment in the domestic economies. Insurance penetration in the economies is also high. Insurance depth as measured by gross written premium as percentage of GDP stands at 3.6 percent as compared to 1.4 percent for Latin American countries. Large insurance penetration is in part due to the country's susceptibility to natural disasters such as hurricanes, volcanic eruptions and earthquakes.

Table 7:
Financial and Insurance Depths
For Selected Countries

Countries/ Regions	M2 (as percentage of GDP) 1/	Gross Written Premiums (as percentage of GDP) 2/
ASIA	**56.6**	**1.9**
Middle East North Africa	**60.5**	**1.1**
OECD	**70.2**	**6.3**
France	..	6.7
Netherlands	..	8.0
Sweden	..	6.2
Switzerland	123.4	12.0
United Kingdom	..	11.8
United States	58.8	10.9
Latin America	**29.6**	**1.4**
Argentina	18.8	1.1
Brazil	26.1	0.9
Chile	35.0	3.0
Europe and Central Asia (non OECD)	**50.6**	**1.0**
Caribbean Region	**51.4**	**3.4**
Belize	42.4	..
Dominican Republic	24.2	1.7
Guyana	53.8	4.2
Haiti	34.5	..
Jamaica	44.7	5.9
St. Kitts and Nevis	70.6	..
St. Lucia	59.1	..
St. Vincent and the Grenadines	56.5	..
Trinidad and Tobago	40.1	4.9
Grenada	77.0	..
Sub-Saharan Africa	**24.7**	**1.1**

Source: 1/ World Bank data Base. 2/ OECD: "Insurance Statistic Year Book" and UNCTAD "Statistical survey on insurance and reinsurance operations in developing countries".
.. = data not available.

However, much remains to be done to foster the developments of both financial and insurance markets.

Financial Markets

Actions which would contribute to the development of financial markets in the Caribbean region are as follows:

Banking sector

- Harmonizing of accounting norms regarding non-performing assets, and supervisory enforcement of adequate loan loss provisioning: Caribbean countries need to correct and harmonize regulations affecting banks and non-banks (finance companies, insurance companies, etc.) and to bring them under identical supervisory regulation. Regulation of non-banks remains weak and very lightly supervised in most Caribbean countries. Also, the limited institutional capacity in the smallest Caribbean countries would suggest the implementation of regional supervision arrangements.

- Improving credit market: Economies of scale in information gathering such as property titling references and collateral pledges support the establishment of credit rating agencies and credit bureaus at the regional Caribbean level. This would assist in providing better secured lending by protecting the rights of both borrowers and creditors. Also, although upgrading and harmonizing of accounting norms regarding the classification of assets has progressed, additional regional harmonization would be beneficial to better integrate credit markets.

- Harmonizing financial resolution mechanism: While most Caribbean countries enjoy relatively stable financial systems, few have implemented contingency arrangements and procedures for handling financial crisis. Monetary authorities in the Caribbean region need put in place modernized banking resolution mechanisms to effectively deal with potentially insolvent banks. Safety net mechanisms include the implementation of explicit yet, limited deposit insurance to provide some protection but limit moral hazards of badly managed banks.

Capital markets

- Deepening government securities markets: It is crucial that Caribbean countries develop government securities market not only for monetary management, but also for providing the benchmark for the private capital market to price corporate fixed income debt securities. In addition, the development of longer term investment instruments would provide a deeper market for pension investments which would further contribute to market depth. Mortgage backed bonds are also a promising source of capital market funding.

- Deepening corporate securities markets: Few of the Caribbean countries have significant equity markets although those that do have achieved capitalization levels in excess of 30 percent of GDP, much above the average of South America for example. Nevertheless, these few equity markets have low liquidity. While governments of the region have attempted to promote equity market development, some restrictions still remain which hamper market liquidity including stamp duty fees, usury clauses (limiting the yields on corporate fixed income securities) and non dematerialization of securities based on lengthy paper-based title changes and their registration. Also, lessening restrictions on foreign assets and highly regulated securities would grow the savings and investment financing base.

- Implementing pension reforms: Since pension spending as a percentage of GDP averages under 3 percent for the region (versus 9 percent for the industrialized countries) and populations are presently young (7 percent on average above the age of 60), the current period is ripe for undertaking reforms to improve pension management with little fiscal risk. Pension funds in the regions are mainly public sector institutions with some private funds catering to the better-off income earners. Measures to improve the future funding prospects of pension and social security systems, including lessening restrictions on investing in high quality foreign and domestic securities, would contribute to deepen the capital market.

- Develop reporting and disclosure standards: Governments can also encourage the growth of the equity markets through the integration of the region's security markets and the privatization of state held enterprises which generally constitute a large asset base in relation to the domestic economies. While efforts have been undertaken to link the region's equity markets, this has not yet borne fruit, mainly because of undeveloped reporting and disclosure standards for listed companies. High costs of regulation and supervision also suggest that such standards would be implemented more cost effectively at regional levels.

Insurance Markets

- Harmonizing, improving and enforcing regulatory standards: Improvement in regulatory standards, solvency, minimum capital, liability estimation based on actuarial experience, and harmonizing regional norms would deepen the insurance market.

- Implementing arrangement to more efficiently transfer catastrophic risks to the international market: Most Caribbean countries are small economies which are vulnerable to natural disasters: hurricane Gilbert resulted in

damages in Jamaica representing almost 33 percent of GDP while in Antigua, hurricanes Luis and Marilyn resulted in losses close to 66 percent of GDP, and in Montserrat the volcanic eruptions resulted in damages amounting to over 500 percent of GDP. The development of the catastrophic insurance market is especially important in the case of catastrophic events, like hurricanes and earthquakes, which can hardly diversify inside small countries. Insurance market directly link international financial markets with national markets through the international reinsurance market. The possibility to use new instruments and financial technologies for transferring catastrophic risks should be examined.

V. CONCLUSIONS

An agenda for moving forward and setting priorities in the above areas is thus crucial at this juncture. The CGCED 2000 Agenda seeks to define the priority commitments of member governments and their industries which can count on the backing of the World Bank Group and the development community.

The World Bank is currently considering ways to help develop the financial and insurance markets in the Caribbean. In particular, the World Bank is very interested in the development of catastrophic insurance markets and pension reforms. The Bank is currently preparing an economic and sector work on catastrophic insurance in the Caribbean to determine the most effective mechanism to transfer catastrophic risks to the international market. Also, the Bank is planning to play an active role in pension sector reforms in the Caribbean region in the future.