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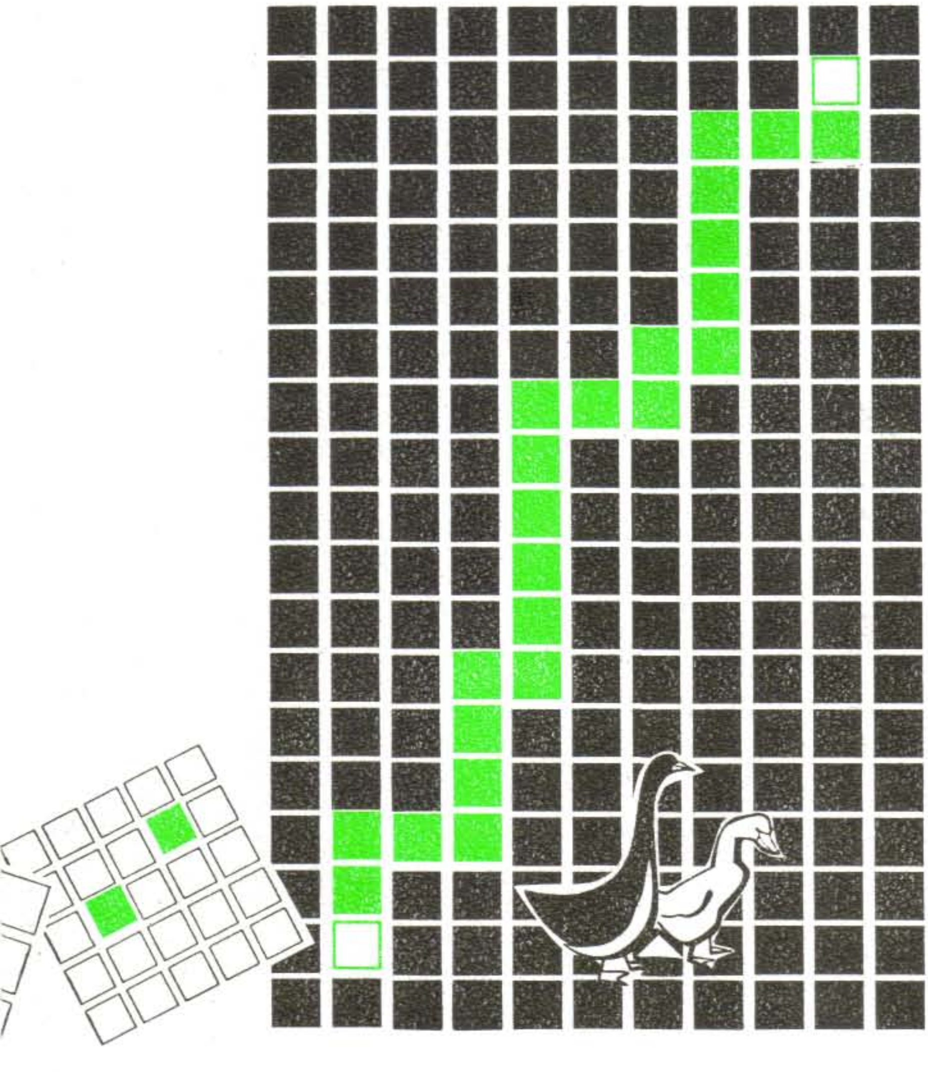

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# FINANCING AGRICULTURAL COMPETITIVENESS IN THE CARIBBEAN*

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## ABSTRACT

The Caribbean economies are facing unprecedented international economic challenges at the dawn of the 21st century. Ever expanding free trade agreements, the expected loss of preferential market access to European markets, increasing integration of capital and financial markets world-wide, and recent advances in biotechnology, combine to challenge policymakers and Caribbean agricultural producers as never before. If Caribbean agriculture is to survive and thrive, a new strategy must be devised and implemented that stresses the rebuilding of competitiveness based on quality, product differentiation, and cost effectiveness and not trade preferences. The paper highlights the major adjustment challenges in the areas of trade liberalization, biotechnology, agricultural support services, and financial market development. It emphasizes that financing of agricultural producers, especially small holders, is a critical shortcoming and that the adoption of new microfinance lending technologies from Asian and Latin American experiences can do much to improve the functioning of financial markets and permit Caribbean agriculture to grow and compete effectively. While much is known about the challenges posed by increasing trade liberalization and inadequate infrastructure to the Caribbean, the paper adds value by integrating the role of financial markets in understanding how a supply response in a liberal policy setting can be facilitated.

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* *The views expressed herein do not reflect the official positions of the institutions represented.*

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The Caribbean economies are facing unprecedented international economic challenges at the dawn of the 21st century. Ever expanding free trade agreements, the expected loss of preferential market access to European and North American markets, and increasing integration of capital and financial markets world-wide combine to challenge policymakers and Caribbean agricultural producers as never before. If Caribbean agriculture is to survive to become a player in the global economy, a new strategy must be devised and implemented that stresses building and the rebuilding of competitive firms and industries--not trade preferences -- based on quality, product differentiation, and cost effectiveness.

Today, nations are advancing strategies to enable firms and industries to gain a competitive advantage in global markets[2]. In the literature, the concept of competitive advantage has a number of distinct meanings[3] (McCulloch). Porter's now familiar "Diamond Model" provides a new framework based on nations creating an enabling environment to achieve a competitive advantage. His model introduces four essential determinants to national competitiveness to include: Factor Endowments, Firm Strategy, Domestic Demand, and Related Industries. This paper focuses on the role of related industries, especially financial markets as an essential element in shaping the competitiveness of Caribbean agricultural producers and agribusiness firms faced with the erosion of preferential trade agreements.

Although much is known about the challenges posed to Caribbean agriculture by increasing trade liberalization, this paper adds value by integrating the role of financial markets

[2]Conventional (Ricardian and Heckscher-Olin-Samuelson) international trade frameworks were based exclusively on the core concept, comparative advantage. A nation was said to exhibit a comparative advantage when it's relative efficiency of producing one commodity was greater when compared with producing another commodity using the same set of resources. Initial factor endowments (land, labor, capital) were the main, if not only, determinant in models based on comparative advantage. However, as demonstrated by the New International Trade Theories (NITTs) of the last decade, increasing returns to scale is as fundamental a cause of international trade as is comparative advantage.

[3]Herein, we use the concept in a manner similar to that given by Hickman (p.6): the ability to sustain, in a global economy, an a'cceptable growth in the real standard of living of the population with an acceptably fair distribution, while efficiently providing employment for substantially all who can and wish to work.

in formulating a strategy that enhances the competitiveness of Caribbean agriculture in a global economy. We emphasize that the financing of agricultural production and value-added agribusiness industries, particularly small-holder enterprises, is a critical shortcoming and that the adoption of new micro-finance lending technologies from Asian and Latin American experiences can do much to improve the functioning of financial markets and permit Caribbean agriculture to grow and compete effectively.

In this paper we first highlight the major adjustment challenges facing Caribbean Community (CARICOM) agriculture in the areas of trade liberalization. To enhance the competitiveness of the agricultural sector, we then discuss the role of financial markets, especially those serving small farms and firms who compete globally.

## 1. ECONOMIC AND POLICY ADJUSTMENT CHALLENGES[4]

The Caribbean Community and Common Market (CARICOM) external trade in agricultural products benefits from a number of special non-reciprocal preferential arrangements under the Lomé Convention, the Caribbean Basin Initiative (CBI), the newly implemented Caribbean Basin Trade Partnership Act (CBTPA), the US Sugar Quota, CARIBCAN, and the special trade relations with Venezuela, the Dominican Republic, and Colombia. However, as the Free Trade Area of the Americas (FTAA) is being negotiated under the umbrella trade liberalization regime of the WTO, those special preferential arrangements are now at considerable risk. Although the WTO has acknowledged the existing preferential arrangements and, therefore, has introduced, in the short run, a waiver rationale for their existence; its long-term goal is toward a Generalized System of Preferences-type regime that will be made available to all developing countries.[5]

Reconciling the tradeoffs between agriculture trade policy and domestic policy is a fundamental economic policy adjustment challenge for all countries participating in the FTAA. Many of the agriculture-related adjustment challenges directly associated with the FTAA will be faced by all economies, not just the smaller ones; all countries, large and small, will face internal economic adjustment and policy challenges. While, in principle, CARICOM countries by virtue of their small size will not necessarily be permanently economically dis-advantaged by their participation in the

[4]This section draws directly from Davis et al.

[5]This goal holds true even though the WTO recognizes the existence of different levels of economic development as a moderating factor in arriving at a liberal trade regime.

WTO/FTAA, nonetheless, small size does limit the range of policy options and increases the vulnerability of these economies to external shocks. For these economies, therefore, the beyond-reciprocity dimensions of regional economic integration must be accorded high priority and must achieve parallel progress in negotiations.[6]

In any case, economic and policy adjustment challenges brought on by this new global economy must be given the highest priority by policy makers. Economic and policy adjustment challenges for the Caribbean economies caused by the on-going trade agreements can be classified into two main subgroups: (1) those adjustments that influence policy makers to negotiate more favorable terms within the WTO [Consistency of Policies and The Challenge of Inclusiveness] and (2) those economic adjustments that require policy makers and agro-food enterprises to formulate *responsive strategies* to globalization [Diversification-Productivity-Competitiveness, Eroding Preferences, Revenue Implications, Stabilizing Foreign Exchange, Maintaining Macro-Economic Balance, and Developing New Value-Added Products].

[6]For example this reciprocity might be achieved through the recognition that small size might warrant some sectoral exemption (whether temporary or permanent) as was the case of cultural industries under NAFTA (Group of Experts).

## 1.1 The Challenge of Negotiating Consistent WTO Policies

Although CARICOM countries are signatories to the WTO accord, the degree to which they conform to the Agreement's rules is likely to be dictated largely by their interpretation of how these rules impact their economic growth and development objectives. All countries manage their trade through various forms of interventions. Though WTO member countries have committed themselves to apply trade restrictions in a non-discriminatory manner and to participate in negotiations to reduce these restrictions, when the details of the WTO rules are examined closely, we discern the possibility of permitting trade restrictions of various kinds, albeit within limits. For example, while the liberalization process ostensibly seeks to achieve export promotion (neutrality) in trade, liberalized trade is simultaneously deemed to be consistent with government intervention, thereby permitting a variety of export promotion intervention policies in specific products and activities. The consequence of this seeming inconsistency is an important challenge for CARICOM countries to identify distinct areas for their own policy intervention in agriculture and agricultural trade that are WTO-legal and that, in the short run, can be utilized in a manner consistent with long-term growth and developmental objectives.

## 1.2 The Challenge of Inclusion in The Globalization Process

A number of factors give rise to CARICOM's apprehension about being fully included in the global trade liberalization process. First, the time period of 10 years given to developing countries for adjustment to the WTO rules is considered to be relatively short. Second, the agreement about agriculture is seen to be largely the product of agreement among the developed countries, particularly the European Union and the United States, with developing countries' concerns largely ignored. Third, because CARICOM is about to enter unfamiliar territory that contrasts strikingly with the sheltered preferential trading systems to which they have become accustomed, much concern centers on the social and political consequences of external shocks. Fourth, the region produces agricultural exports that are comparatively high-cost and non-competitive at prevailing world market prices (see Table 1).

The difficulty in strategically repositioning themselves to meet global competition is not only the high-cost, non-competitive structure of CARICOM's agriculture but that, at this juncture, it has also embraced the open regionalism model of economic integration. This model caters for the formation of sub-regional trading blocs within the group (for example, the OECS) as well as supra-regional blocs (for example, the Association of Caribbean States (ACS) and the ACP), that facilitate linkages with still other blocs, ultimately synthesizing into a global free trade area. The various groupings are expected to function as building blocks and not stumbling blocks. The belief is that, in the absence of such concentric relationships, small economies might not be able to secure the necessary assistance for them to survive as a regional entity (Dookeran). The model permits preferential elements in these trading relations, but generally, import barriers are expected to be low. Though open regionalism is an appealing model for CARICOM, it should be recognized that, operationally, it could create a serious dilemma in that "too much openness" and "too many outside relationships" could reduce the inner discipline required for effective decision-making and bargaining skills. The challenge, therefore, remains how to include in the trade negotiations economic arrangements that will go beyond trade to foster economic development within the region.

## 1.3 The Challenge of Achieving Diversification and Increasing Productivity and Competitiveness

In the long run, policies must be designed to increase international competitiveness through direct productivity enhancement initiatives and the diligent pursuit of diversification, rather than to prolong "special" treatment. This strategy calls for high-quality strategically targeted research. Indices of total factor productivity (TFP) and diversification in agriculture for the CARICOM countries of Jamaica and Trinidad and Tobago show relatively low, but positive, growth rates. But, from the mid-1970s to the present, they have exhibited negative annual growth rates. Moreover, in the absence of offsetting research and economic policy instruments, as these two countries have sought to push the outside of agricultural diversification envelope (in response to declining demand for traditional exports), Langham and Davis, and Langham et al report an associated decline in marginal factor productivity (MPF). Even though those estimates are provided for only two CARICOM countries, they nonetheless offer evidence that the productivity coupled with diversification must be given high priority within sub-regional trade liberalization challenges.

### 1.4 The Challenge of Eroding Trade Preferences

The threat of the erosion of preferences underscores the need for CARICOM producers to pursue international competitiveness as the only sustainable basis for securing their presence in global markets. The two commodities that benefit most under existing preference schemes are sugar and bananas. In the case of sugar, the region receives preferences under both the EU/ACP Sugar protocol and under the U.S. Sugar Act. Apart from guaranteed quotas, the prices paid are based on the subsidized price paid to domestic beet farmers in the European Union and domestic cane farmers in the United States, both of which are well above the world free market prices. In the case of bananas, the region benefits through a system of quotas placed on non-ACP "dollar" bananas by the European Union and receives a price that compensates their relatively higher-cost producers. This arrangement has so far been challenged successfully by the United States and supported by Central American banana producers in the WTO. The European Union has since modified this arrangement, but the retention of an import quota on "dollar bananas", alongside duty-free access quotas for ACP bananas, still faces legal challenges in the WTO and the threat of trade retaliation by the United States.

To be effective, CARICOM policy interventions will have to be timely, focused, and less arbitrary than before. The quality of intervention will determine the direction and the speed of liberalization and will define as well the environment within which micro-level resource allocation decisions are made. Thus, in the case of bananas, the particular challenge is how best, on the one hand, to restructure, diversify, and introduce efficiency-enhancing measures into the supply function and how, on the other hand, to market the product based on quality differentiation strategies, which create a unique "Caribbean banana" that can withstand competition from dollar bananas. With respect to sugar, the challenge is to increase productivity, to stimulate divestiture (although this did not seem to work in the case of Jamaica) (Caribbean Update), and to diversify, where possible, into sugar-based industries while trimming the industries to leave only the commercially viable producers. Like bananas, the need will exist to identify niche markets where quality and special properties matter more than price.

### 1.5 The Challenge of Losing Government Revenues

An Organization of American States (OAS) study has found that, eight of the eleven CARICOM countries rely on trade taxes for 20 percent or more of government revenue (Table 2). A major challenge that will result from reciprocal trading arrangement, is the need to find alternative sources of government finance.

### 1.6 The Challenge of Stabilizing Foreign Exchange

CARICOM countries' agricultural exports are not only confined to one or two products, but these products face significant price fluctuations for the portions sold on world markets. The existence of preferential arrangements has served to somewhat mitigate these price fluctuations so that the erosion of these preferences is likely to expose these countries to greater fluctuations in price and, hence, foreign exchange earnings.

### 1.7 The Challenge of Maintaining Macroeconomic Balance and Completing Trade Liberalization

Although we have seen several CARICOM countries take steps – unilaterally, regionally, and multi-laterally – to introduce economic reforms and to restructure their economies, this effort will need to be maintained and perhaps accelerated in some situations. Substantial trade restrictions still remain, and tariff rates are still relatively high compared with some of the other developing countries in Latin America.

### 1.8 The Challenge of Developing Value-Added Products

A recent SELA report indicates that, during the past 20 years, a shift has occurred away from trade in bulk processed and unprocessed agricultural commodities - such as grains, raw sugar, oilseeds, flour, and oils - to consumer-ready processed and unprocessed commodities - such as fresh fruits, vegetables, breakfast cereals, pastas, refined sugar, beverages, and processed fruits. The study also notes that Latin America and the Caribbean lag behind the rest of the world in the movement to upgrade its processing sector to capture this value-added market. The export challenge facing the region's agriculture is to get the process of identifying niche markets and such special products started early and to press the need for the liberalization of these more so than the liberalization of agricultural raw materials. This strategy calls for an aggressive program as it is unlikely that small countries will be able to compete head-on with their larger counterparts in the same primary products markets.

## 2. FINANCIAL MARKETS MATTER

This section seeks to underscore the importance of the financial markets in enhancing the competitiveness of the agricultural sectors in the Caribbean. Well-functioning financial markets will be essential to facilitate the modernization and diversification of agricultural sectors in coming years. Without effective rural financial markets, farmers and agribusiness firms will not be able to make productivity enhancing investments, change crop mixes, smooth consumption patterns, or easily receive and make timely payments over long distances. Rural finance implies greater risk than urban or commercial finance and for sustained and profitable entry into this segment a constellation of factors is needed to include: (1) enabling economic and regulatory policies, (2) a sufficient number of creditworthy clients, (3) financially sound and well-managed intermediary institutions, and (4) intermediary institution that possess appropriate service delivery technologies. In this section, we first examine the structure of financial markets; the predominant credit delivery technologies, and interest rate policies. Second, recommendations are made on what changes will be necessary in the financial technologies and policy settings to improve the chances that the finance sector can play a positive and facilitating role in the transformation of Caribbean agriculture.

### 2.1 Structure of Financial Markets

Financial markets in the Caribbean can be divided into two major groups: formal and informal.[7] The regulated

[7]The five types of formal (or semi-formal) institutions are: (1) private commercial banks; (2) finance and trust companies; (3) non-banks (credit unions, cooperatives, and building societies); (4) specialized, state-owned or sponsored development finance organizations; and (5) and credit-granting, non-governmental organizations. In addition to the formal and semi-formal institutions, informal institutions include: (1) traders; (2) suppliers; (3) processors; (4) moneylenders; (5) relatives; and (6) family.

formal institutions (private banks and finance companies) tend to be have larger capital bases, well trained staff, and clear governance incentives but have high cost structures and find it difficult to gather and process information on rural client credit-worthiness. The non-regulated formal and semi-formal (NGOs, credit unions, cooperatives) have better access to information on rural clients but have smaller capital bases, inadequate governance incentives, and suffer from high covariate risk in loan portfolios. State-owned institutions have large capital bases but are prone to political interference in decision-making and high cost administration. Informal institutions have reliable and low-cost access to information on potential clients and can more easily enforce credit contracts due to interlinked contracts and social pressure. However, informal institutions have very small capital bases and narrow locational advantages, they can not extend services to many or outside a particular geographic region.

Currently, the principal sources of formal rural finance are non-governmental organizations (NGOs), credit unions (CUs), private commercial banks, and state-owned institutions. (See Table 3)[8] The state-owned specialized institutions and private non-bank financial institutions(NGOs and CUs) attend mostly smaller clients and the private commercial tend to finance larger clients involved in export agriculture and agro-processing. The non-banks may have more clients but a smaller total loan volume than the commercial banks. Most of the private non-banks, NGOs and CUs, are either dependent on external donor or central government funds or small deposit bases mobilized from members and have not attain financial sustainability. Prior to the arrival of NGOs and CUs, government-sponsored or owned specialized institutions (National Development Foundations (NDFs) and agricultural development banks) played a vital role. With the exception of Belize, NDFs have declined in importance. In Jamaica, Trinidad and Tobago, and Guyana, state-owned banks are largely moribund. In the case of Trinidad and Guyana, agricultural development banks are in the process of restructuring and focus more on the collection of existing loans and than on making new agricultural loans. Because reliable data are unavailable on the

[8]Relatively few micro-credit NGOs are operating, and quite a number of Credit Unions. Credit Unions, however, despite high rates of penetrations and 4 % share of total claims on private sector lending (Ratio of Coop/Bank loans for 1998) are not uniformly engaged in rural finance. Many credit unions are closed bond in the Caribbean, and farm, small business and micro lending are either relatively new product lines or represent small portions of total portfolios. Most credit unions are heavily involved in consumer and mortgage lending.

informal sector, no definitive conclusions can be drawn except to say that much anecdotal evidence exist to suggest that informal finance is significant.

Formal financial markets in the Caribbean tend to be relatively small in terms of total assets and dominated by a few banks, many of which are foreign-owned. The total estimated bank assets for the Caribbean countries is much less in absolute terms than a selected group of Latin American counterparts (average total assets for the Caribbean countries examined in this paper is US$7 billion, versus US$84.6 billion for the comparator Latin American countries (Bankscope). Nonetheless, the Caribbean countries have a higher average level of financial depth as measured by the domestic credit provided by the banking sector to GDP, 40% v. 30% (Table 4). This particular measure indicates that savings in the Caribbean are more often held in financial form.

The structure of the Anglophone Caribbean's financial sector, however, tends to be less competitive (see Table 3). A few dominant banks hold a disproportionate share of assets in their respective markets, and competition tends to be based on service rather than interest rate pricing (DeMontfort University). While the entry of foreign-owned banks in Latin America in the last decade has triggered banking mergers among nationally-owned banks and in some cases forced nationally owned banks to move "down market" into consumer, micro finance, and rural finance; this phenomenon has not occurred in the Caribbean.[9] Foreign-owned banks have been present and dominant in the Caribbean since the early days of independence, and no strong market forces are driving banks to seek new market niches. Furthermore, given the limited availability of risk mitigation tools in rural finance, such as crop insurance and futures markets, Caribbean commercial banks are less wont to enter into rural finance, a particularly risky market segment.

## 2.2 Inappropriate Credit Technologies

Caribbean rural and micro-finance organizations tend to manage credit risk through the threat of foreclosure on fixed collateral rather than through a careful analysis of the client's character, quality of management, financial strength, and willingness and ability to build and maintain a long-term lending relationship. As a result, the loan

[9]In Jamaica and Guyana, bank mergers and consolidation have occurred in the 1990s due a financial crisis in the former case and the decision to privatize state-owned banks in the latter case. The new banks that emerged in both cases have tended to focus lending in the less risky sectors of the economy, consumer, corporate, and mortgage, and enter into agriculture only when export prices of principal agricultural commodities are very high.

evaluation process in Caribbean rural and micro-finance organizations tends to generate high levels of transaction costs due to the need to have "proper legal documentation," in the belief that a well documented loan is a "sound" one. While "character-based" lending methodologies are not prohibited under most existing regulatory regimes in the Caribbean, the larger the financial institution, the greater the tendency to follow prevailing guidelines concerning collateralization and documentation for small and micro business loans. The exception is consumer lending, which is targeted largely to salaried workers. In a number of cases Caribbean rural and micro-finance institutions provide credit plus technical assistance and training. Often the training is a pre-condition to receiving a loan and has little value to the client. Other times the technical assistance is of poor quality and can serve as a pretext for loan default. In short, credit plus technologies, while logically appealing, tend not to work in practice and generate even higher levels of administrative costs for the lender-provider.

In contrast, many of the better functioning Asian and Latin rural and micro-finance organizations have less stringent fixed collateral requirements – or none at all - and depend more on alternative collateral (moveable) and repayment incentives (graduated lending or interest rate rebates for prompt payment). Clients tend to "prove" themselves creditworthy through a series of ever-increasing small loans. As the loan size increases, more collateral may be required; but if the client uses the initial loan productively, then a rise in income will permit the use of more collateral. In addition, the emerging best practice technology is minimalist. The lender provides only credit and seeks to ruthlessly minimize cost while the client can seek needed technical assistance or training from another source. In essence, credit risk in Asia and Latin America is managed through a "termination threat": given the difficulty farmers and small and micro entrepreneurs have in accessing formal credit in most developing countries, Latin rural and micro-finance organizations in effect threaten to close access to credit to clients who default, and project a tough image simply by monitoring delinquency closely. Caribbean rural and micro-finance organizations' heavy reliance on asset-based lending or "threat to foreclose" technology is inappropriate because low-income, small and micro entrepreneurs by definition have limited amounts of fixed collateral (Wenner and Chalmers).

### 2.3 Low Interest Rate Policies

Historically, Caribbean financial systems have been characterized by stable and low interest rates (Table 5). Hence, Caribbean rural and micro-finance organizations feel constrained socially to charge rates that are not perceived as "usurious". Both the nominal and real interest rates charged to clients are much lower than the averages in Latin American comparator institutions, often at the expense of sustainable operations or cost recovery. While this results in cheaper funds for farmers and micro-entrepreneurs, it has many negative side effects: namely, a reduced ability to expand and offer more credit to more micro-entrepreneurs; and, related to this, a rationing of credit. Without the growth that comes with more complete cost recovery, these rural and micro-finance organizations continue to maintain a small client base, and the credit tends to gravitate towards a relatively wealthy group of individuals with superior collateral, information, and connections. Agricultural credit tends to be a disproportionately small share of total credit compared to its share in GDP and contribution to export earnings (Table 6).

The reasons for this tendency to charge low interest rates are two-fold: first, it is due in part to a historical view of the rural sector as needing and deserving of help in the form of subsidized credit; and second, it is due to the competition from government-sponsored credit schemes which subsidize their interest rates in the name of correcting market imperfections.

Second-tier institutions and national development banks have been the favored vehicle for channeling small business and agricultural loans in the Caribbean. Yet these institutions have been characterized by inefficiency, poor outreach (loaning a small amount – in terms of gross portfolio size) difficulty in recovering loans, and a tendency to undercut the small and micro-finance industry by fixing loans at below-market rates. Three cases in point are the Agricultural Credit Bank of Jamaica, the Agricultural Development Bank of Trinidad and Tobago, and the Guyana National Cooperative Bank. All have very high arrears and high administrative costs. In the case of the Guyana National Cooperative Bank, 92 percent of its assets are non-performing as of 1999 (Wenner and Chalmers).

## 3. RECOMMENDATIONS AND CONCLUSIONS

To meet the adjustment challenges highlighted in section one, Caribbean policymakers and managers of financial institutions will have to work in concert to create a more efficient, deep, and competitive rural financial markets across the Caribbean community. Specific actions will be needed to promote a more favorable policy environment, to improve retail capacity, and to introduce more effective risk mitigation techniques. The degree of difficulty is high.

### 3.1 Policy Environment

Improving the competitiveness and profitability of rural economic activities is fundamental in generating effective demand for financial services. Without income expanding opportunities, rural clients will not be sufficiently creditworthy to be able to demand credit or save sufficient income to make regular saving deposits. Likewise, more rational and adequate legal and financial regulations can serve to reduce the cost and risk of intermediation and thus encourage financial intermediaries to become more active in rural finance (policy affecting supply of financial services).

Supply side interventions focus on reducing cost and risk of intermediation. Caribbean financial institutions, especially those attempting to serve low-income, small-scale farm producers and non-farm entrepreneurs face greater risk. In general low-income clients do not have large amounts of fixed property that can be pledged as collateral to obtain a loan. Thus, a wider universe of property needs to be acceptable as collateral: equipment, grain inventories, jewellery, vehicles, livestock, appliances, etc. Similarly, public deed registries have to make more efficient so that financial institutions can quickly and at a reasonable cost search registries for existing liens and record and register new liens. If the financial contract is breached, then the lending institution needs to be able to see legal recourse and recover the outstanding debt. Many legal enforcement procedures are too slow and costly and make no sense if the value of the loan is small. Another asset that low-income clients have that is not capitalized upon is their reputation for consistent, on-time repayment. The dearth of credit bureaus and the absence of formal credit histories, preclude many from using a "good repayment reputation" as a signal of creditworthiness. Another supply side impediment is the long period it takes to clear checks and the limited use of checks as a payments mechanism. The long delay to clear a check (7-14 days), for example, can effectively be used as a 30-day supplier credit which is a common source of financing for small business persons. The heavy dependence on cash transactions can serve as a hindrance in a globalizing economy where countries that can quickly and accurately transfer payments will have a competitive business advantage over those that can not do so. Much of the ability to clear checks faster has to do with connectivity and signature verification protocols. Given the small size of the markets and the limited number of financial intermediaries this should be relatively easy task to accomplish. In addition, the Caribbean states may need to review Banking Acts to see if institutional space can be created for institutions dedicated to rural and micro-finance. Traditional commercial banks lack the appropriate technology and the vocation to attend markets characterized by small but numerous transactions and clients lacking in fixed collateral. Nevertheless, to make the entire financial system stronger, improved financial supervision is needed throughout the region. Much has been accomplished in the 1990s but more work is needed to better train staff, improve auditing rigor, and create more transparency and public disclosure. Lastly, postal savings, a popular form for low- and moderate-income people to save in previous times may need to be revisited. Small savers face high minimum balance requirements in commercial banks and commercial banks do not have many if any branches in outlying rural areas. This makes access for savers difficult, especially in the larger states with hinterlands: Belize, Guyana, Suriname, and Jamaica.

Several policies can influence the demand for financial services. To make clients more creditworthy, governments in the region need to improve land tenure. In several countries, Jamaica, Trinidad, and Guyana lack of secure land tenure can contribute to making access to short-term credit difficult and more importantly dissuade owner-operators from making long-term productivity enhancing investments. Better grading would permit the development of new financial and risk management products such as warehouse receipts and futures. More consistent enforcement of the CARICOM Common External Tariff would permit for example, infant industries such as coconut oil processing and soap production to develop. At present the non-application of the import of edible vegetable oils and fatty products places coconut producers in Dominica and Guyana at a serious advantage. Needless to say, increased investments in and better functioning of agricultural support services and rural infrastructure will serve to lower production and marketing costs and permit strategic diversification and value added processing. Tax holidays and other incentives may be needed for the establishment of agro-processing industries to help improve the value chain.

### 3.2 Institutional Retail Capacity

The Caribbean will have to strengthen and improve credit delivery technologies in existing institutions based on "best industry standards" emerging in Asia, Africa, and Latin America; revise where necessary Banking Acts to permit the creation of specialized rural and micro-finance institutions with less minimum capital requirements than a bank but higher capital adequacy ratios; and enhance supplier credit schemes. Many of the lending technologies used are outdated and contribute to limited outreach and poor financial performance. Improved leadership and staff training are needed. In addition, more institutional flexibility may be needed to allow for the creation of privately held but specialized institutions that will attend the under-served markets. Lastly, supplier and contracting farming schemes, wherein an agricultural supplier or agro-processor can extend credit to numerous small farmers, need to be actively developed. This particular type of arrangement has particular market appeal, in that commodities that are profitable and have good market demand can be developed in a vertically integrated manner. Private capital will be easier to attract in such schemes and government can focus its limited results on improving the support services and infrastructure needed for a particular high potential sector.

### 3.3 New Products and Risk Mitigation Techniques

New products and new techniques are needed to mitigate against the high levels of price and production risk. Farmers need access to insurance products (life, credit, and casualty) and modern risk management techniques such as futures markets and warehouse receipts/commodity repurchase agreements. Other new products such as leasing of agricultural equipment and vehicles and electronic cards (debit and charge) can represent ways to substantially lower transaction costs and extend medium-term credit to collateral constrained firms and individuals. These new products require certain scale, legal and tax treatment preconditions and macroeconomic stability. The Caribbean in general is blessed with macroeconomic stability and could concentrate on improving the legal conditions. Two of the most pressing needs are to develop safe and convenient deposit mobilization services and medium- and long-term credit. First, in the larger Caribbean states (Belize, Guyana, Suriname, Jamaica, and Trinidad and Tobago) many rural residents do not have many conveniently located deposit-taking institutions. Reconstituted postal savings systems could be one alternative. The tradition began in the British colonial era in the 1800s but most postal systems with the exception of Trinidad and Tobago have been either dismantled or privatized. In the case of Jamaica and Guyana, the two banks that took over the postal savings system failed to deliver quality services and desertion occurred. In the case of Jamaica, Worker's Bank was intervened. A reconstituted system should be placed back in the Post Office and investments made only in safe government and triple A commercial paper. In addition, much of the recent advances in smart cards and computer technology can be applied to significantly reduce transaction costs. Second, increasing of supply of medium and long term savings is crucial to any attempt to diversify crop mixes, to make fixed investments, and to plant perennial crops. Increasing domestic savings rates, maintaining low inflation, reducing risk in the agricultural sector, and attracting large institutional savers (pension funds) to invest in banks will be key objectives to make this a reality.

In conclusion, the Caribbean economies are facing a number of fundamental economic and policy adjustment challenges at the dawn of the $21^{st}$ century, namely: how to wean itself from preferential trading systems, how to increase competitiveness, how to diversify its agricultural production, and how to add value to its agricultural commodities. Since the Caribbean has a small endowment of arable land, it will unlikely be able to compete in volume; the region will have to differentiate itself by providing quality products, fill markets during certain windows of opportunity, and develop valued-added products for niche markets. To improve growth and modernization possibilities, concerted actions will be needed on a number of fronts: astute trade negotiations; massive commitments to improve agricultural support services and physical infrastructure; efforts to improve the legal and regulatory framework; and efforts to improve financial institution retail capacity, a "related industry" in Porter's Diamond Model of competitive advantage. The discrete tasks have been identified and highlighted. The main challenge is to summon the political will needed to commit to the difficult task at hand and to allocate resources, both human and financial, needed to implement a strategy of agricultural modernization.

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**Table 1. Major Agricultural Commodities: Area, Volume, Yield (1998)**

| Country | Commodity | Area (ha) | Volume (tons) | Yield (mt/ha) |
|---|---|---|---|---|
| Belize | Sugar | 24,000 | 1,208,000 | 50.33 |
| | Citrus Fruit | NA | 211,000 | |
| | Bananas | NA | 81,000 | |
| | Rice | 8,000 | 17,000 | 2.125 |
| Barbados | Sugar Cane | 8,000 | 449,000 | 56.125 |
| Dominica | Bananas | NA | 52,000 | |
| Guyana | Sugar | 44,000 | 2,600,000 | 59.09 |
| | Rice | 129,000 | 532,000 | 4.12 |
| Jamaica | Sugar | 36,000 | 2,284,000 | 63.44 |
| | Bananas | NA | 164,000 | |
| | Coffee | NA | 2,000 | |
| Suriname | Rice | 54,000 | 213,000 | 3.94 |
| St. Lucia | Bananas | NA | 91,000 | |
| Trinidad &Tobago | Sugar | 25,000 | 900,000 | 36 |

Source: ECLAC, 1999 Statistical Yearbook for Latin America and the Caribbean.

Note: /a In order to put the yield data in perspective, the Caribbean is not as productive as leading countries. For example, the cane sugar yield for 1998 in the USA is 80.2 mt/ha and Brazil is 68.4 mt/ha, and Mauritius is 79.4 mt/ha compared to 59 mt/ha in Guyana, 36 mt/ha in Trinidad, and 50 mt/ha in Belize. In rice, Japan produces 6.2 mt/ha, USA 6.3 mt/ha, and Venezuela 4.0 mt/ha while Guyana producers 4.1 mt/ha, Suriname 3.9 mt/ha and Belize 2.1 mt/ha. (FAO Production Yearbook 1998)

**Table 2. Trade Taxes as Share of Government Revenue and GDP, CARICOM, 1997**

| | Trade Taxes as a Share of (%) | |
|---|---|---|
| Country | Government Revenues | GDP |
| Antigua & Barbuda | 22 | 5 |
| Barbados | 24 | 7 |
| Belize | 37 | 9 |
| Dominica | 20 | 6 |
| Grenada | 22 | 5 |
| Guyana | -- | -- |
| Jamaica | 21 | 6 |
| St. Kitts & Nevis | 30 | 6 |
| St. Lucia | 55 | 14 |
| St. Vincent & Grenadines | 18 | 5 |
| Trinidad & Tobago | 8 | 5 |

Source: OAS.

**Table 3. Selected Characteristics of Caribbean Financial Sector**

| Country | Estimated Number of Financial Institutions | Dominant Micro and Rural Lenders/ Type of Institution |
|---|---|---|
| Barbados | Commercial Banks (7–3 foreign-owned)<br>Merchant Banks, Trust and Finance Companies (5)<br>Credit Unions (38)<br>Development Finance Institutions (3) | FUND ACCESS (Government)<br>Barbados Enterprise Growth Fund (Venture capital fund for small and medium enterprises) |
| Belize | Commercial Banks (4-two are foreign-owned branches)<br>Credit Unions (10)<br>Thrift and Finance Companies (NA)<br>Development Finance Corporation<br>NGOs (4) | National Development Foundation of Belize (NGO)<br>Commercial Banks |
| Guyana | Commercial Banks (6)<br>Development Banks (2)<br>Credit Unions (80 est.)<br>NGOs (3) | Institute of Private Enterprise Development/IPED (NGO)<br>Guyana Bank of Industry and Commerce(Commercial bank)<br>Guyana National Cooperative Bank (State Bank)<br>Scotia Enterprise/Bank of Nova Scotia (Commercial bank)<br>Cooperation of Development (NGO, Local affiliate of parent UK NGO) |
| Jamaica | Commercial Banks (4)<br>Development Banks (2)<br>Merchant Banks (20)<br>Credit Unions (66)<br>Building Societies (5)<br>NGOs (8) | Worker's Bank[1] (Commercial bank)<br>Agricultural Credit Bank/Peoples Co-operative Banks (State-owned Second tier bank and state- sponsored First tier retailers)<br>National Development Fund of Jamaica (NGO) |

| | | |
|---|---|---|
| Trinidad and Tobago | Commercial Banks (5 – two foreign owned)<br>Finance Companies and Merchant Banks (9)<br>Credit Unions (398 – but only 163 active)<br>Development Finance Institutions (3)[2]<br>Thrift Institutions: Post Office Saving Bank (1) and Building Societies (3) | Agricultural Development Bank (State Bank)<br>FUNDAID (NGO) |

1. Worker's Bank in Jamaica was intervened in 1998/9. The micro-finance portfolio has been absorbed by Union Bank, a new bank based on the acquired assets of several failed banks. Union Bank intends to sell the micro-finance portfolio to a Building Society.
2. In Trinidad, FUNAID, Agricultural Development Bank (ADB), and Small Business Development Company (SBDC) are characterized as development finance institutions. Ownership structure is different but the mission is the same. ADB is government-owned, SBDC is mixed public-private guarantee fund, and FUNDAID, is a private NGO but almost 100% dependent on national government funding.

Sources: DeMontfort University. 1997; Sobotka and Holden. 1998; Tewarie, 1998; Bresnyan. 1996; Caribbean Centre for Monetary Studies. 1998. Zepirin and Russell. 1999. IDB Trinidad and Tobago: Diagnostic Study . 1999.

**Table 4. Financial Depth, Breadth, and Market Concentration in Selected Caribbean and Latin American Financial Markets**

| Country | Domestic Credit (in millions of US$) | Domestic Credit/ GDP | Total assets of Commercial banks (in Millions of US$) | Number of commercial banks | Percent of total assets owned by 3 largest commercial banks |
|---|---|---|---|---|---|
| Caribbean | | | | | |
| Bahamas | 3,809.2 | 70.6% | 21,519 | 35 | 39% |
| Barbados | 1,618.95 | 54.8% | 2,119 | 5 | 70% |
| Belize | 391.215 | 48.1% | 1,626 | 2 | 100% |
| Guyana | 684.0055 | 19.5% | 2,051 | 4 | 100% |
| Jamaica | 3,025.527 | 28.3% | 10,293 | 26 | 59% |
| Suriname | 152.398 | 21% | 4,028 | 4 | 91% |
| Trinidad & Tobago | 2,647.182 | 38.6% | 7,272 | 18 | 55% |
| Average for Caribbean | 1,761 | 40.12% | 6,987 | 13 | 74% |
| Selected Latin Countries | | | | | |
| Bolivia | 5,493.656 | 53% | 24,278 | 20 | 65% |
| Colombia | 33,592.65 | 22.9% | 212,364 | 64 | 42% |
| Dominican Republic | 6,339.797 | 19.7% | 44,349 | 21 | 80% |
| El Salvador | 5,427.886 | 41.5% | 22,011 | 18 | 75% |
| Peru | 13,779.2 | 14.1% | 120,176 | 33 | 38% |
| Average for Selected Latin Countries | 12,926.63 | 30.24% | 84,635 | 31 | 60% |

Source: International Financial Statistics July 2000 and Bankscope (financial data service produced by Bureau van Dijk).

**Table 5. Selected Population and Macro-economic Indicators**

| Countries | Population 1998 (millions) | GDP Per Capita 1998 (US$) | GDP Growth Rate (1990-98) | Average Annual Inflation Rate 1990-98 | Average Lending Rate (1999) |
|---|---|---|---|---|---|
| Caribbean | | | | | |
| Bahamas | .3 | 12,400 | .8 % | 2.9% | 6.38% |
| Barbados | .26 | 6,610 | .7% | 2.4% | 9.25% |
| Belize | .24 | 2,660 | 3.5% | 3.1% | 16.27% |
| Guyana | .85 | 780 | 9.8% | 16% | 17.11% |
| Jamaica | 2.6 | 1,740 | 1.5% | 29.1% | 27.01% |
| Suriname | .44 | 1,660 | .8% | 138% | 27.75 % |
| Trinidad & Tobago | 1.3 | 4,520 | 2.8% | 6.9% | 17.33% |
| Av. For Caribbean Countries | 855 | 4,338.57 | 284% | 28.34% | 17.3% |
| Selected Latin Countries | | | | | |
| Bolivia | 7.9 | 1,010 | 4.6 | 9.9 | 35.37 |
| Colombia | 40.8 | 2,470 | 3.5% | 21.5% | 30.41 |
| Dominican Republic | 8.3 | 1,770 | 5.3% | 10.6% | 25.07 |
| El Salvador | 6.1 | 1,850 | 5.2% | 8.9% | 15.46 |
| Nicaragua | 4.8 | 370 | 3.8% | 38.9% | 22.15 |
| Peru | 24.8 | 2,440 | 5.8% | 33.7% | 30.80 |
| Av. For Selected Latin Countries | 15.45 | 1,651 | 4.7% | 20.58% | 26.54% |
| Selected Asian Countries with Strong Rural Micro-finance Sectors | | | | | |
| Bangladesh | 125.6 | 350 | 4.9% | 3.6% | 14.13 |
| Indonesia | 203.6 | 640 | 4.1% | 12.2% | 27.66 |
| Thailand | 61.2 | 2,160 | 4.6% | 4.8% | 8.98 |
| Average Asian Countries | 130.13 | 1,050 | 4.5% | 6.86% | 16.92 |

Source: United Nations Human Development Report 2000 and International Financial Statistics.

**Table 6. Trends in Flow of Agricultural Credit**

| Country | Measure | 1995 | 1996 | 1997 | 1998 | 1999 |
|---|---|---|---|---|---|---|
| Jamaica | Agricultural Credit (US$ million) | 904 | 1,402 | 1,847 | 1,370 | 1,081 |
| | Percent Change | | 36.51 | 37.33 | -24.35 | -12.12 |
| | Percent of Total Private Credit | 6 | 4.1 | 3.9 | 3.7 | 4.3 |
| | Percent Growth in Real Agricultural GDP in 1986 Constant Prices | 2 | 3 | -14.6 | -0.3 | 3 |
| | Real Agricultural Output per Worker (Jamaican $ Constant 1986) | 6714.9 | 6961.5 | 6371.3 | 6437.7 | |
| | Percent Change | 5.09 | 3.67 | -8.48 | 1.04 | |
| Guyana | Agricultural Credit (US$ millions) | 23.66 | 56.26 | 50.45 | 49.50 | |
| | Percent Change | | 137.78 | -10.32 | -1.89 | |
| | Percent of Total Credit | 21.1 | 26.5 | 21.1 | 21.6 | |
| Trinidad &Tobago | Agricultural Credit (US$ millions) | 17 | 17 | 17 | 18 | 46 |
| | Percent Change | | 1 | 2 | 4 | 159 |
| | Percent of Total Credit | 1.3 | 1.3 | 1.1 | 1.0 | 2.3 |
| | Growth in Real Agricultural GDP (Constant 1985) | -1.3 | 7.7 | -0.7 | -14.1 | 16.4 |

Source: IMF Recent Economic Development Reports (Article IV consultations 1999) for Jamaica and Trinidad. Guyana Statistical Bulletin, Bureau of Statistics, June 2000 and Bank of Guyana Reports, 2000.