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**Proceedings of the National Workshop  
on the Ghana Futures Exchange**

**June 1999**



**Sigma One Corporation**

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**Proceedings of the National Workshop  
on the Ghana Futures Exchange**

**Novotel Hotel  
Accra, Ghana  
June 10-11, 1999**

**Submitted to:**

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Ghana**

**June 1999**

**Sigma One Corporation**

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List of Registered Participants
Programme for the Workshop
Workshop Planning Committee

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## EXECUTIVE SUMMARY

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The Workshop on the Ghana Futures Exchange was organised by the Ghana Stock Exchange with sponsorship by the Bank of Ghana, Securities Regulatory Commission, Commodities Clearing House Ltd. and USAID/Sigma One Corporation on June 10-11, 1999, at Novotel, Accra. The objective of the workshop was to educate and solicit views of the various stakeholders on the development of the Ghana Futures Exchange. This process was part of the recommendations of the pre-feasibility study on the exchange which advised that prior to the commissioning of a feasibility study for the development of the exchange, the requisite ownership, commitment and support of the various stakeholders must be sought.

The topics that were covered during the workshop included:

- \* Overview of a Futures Market
- \* Futures Market Regulation
- \* Interventionist Policies in Agricultural and Financial Markets
- \* Market and Institutional Arrangements for a Futures Exchange
- \* Warehouse Receipt Systems

This report on the workshop covers the proceedings (presentations and discussions), linkages with the pre-feasibility report, overall conclusions of the workshop and the identification of the next steps required for the development of the Ghana Futures Exchange.

The key issues raised at the workshop, which will mostly be the subject of the feasibility study and the implementation, included:

### Futures Market Regulation

- \* Legal Framework within which the exchange can function; the need for appropriate legislative action to support the development of the exchange.
- \* Whether the Security Regulatory Commission should regulate the futures exchange through the revision of the Securities Industries Law to include regulatory requirements of the futures market and related products or whether there should be an independent regulatory agency for the futures exchange.
- \* Whether the exchange should be self-regulatory for some time before the requisite legislative instruments are developed or the regulations should be developed simultaneously with the exchange.
- \* The relationship between the Clearing House and the Futures Exchange.
- \* The treatment of futures transactions under the existing tax regimes.

### Interventionist Policies in Agricultural and Financial Markets

A number of government interventionist policies that affect price determination in the commodities and financial markets were identified:

- \* Financial futures development is highly susceptible to intervention due to Bank of Ghana's role in the foreign exchange market and the determination of the interest rates in the government bill/bond market;
- \* Effect of the absence of a strong secondary market for government securities on the development of the exchange; and
- \* Trade policies, e.g., government monopoly on price and export of cocoa.

#### Market and Institutional Arrangements for a Futures Exchange

- \* Membership structure and qualification for the exchange
- \* Capital requirements of members
- \* Trading mechanism
- \* The Clearing House system
- \* Training requirements for market participants and regulators

#### Warehouse Receipt Systems

- \* Importance of a credible system for a commodity futures market;
- \* Regulatory framework for development of the warehouse receipt system;
- \* Pro-active schemes developed by the private sector to support development of the receipt system;
- \* Systematic constraints to the development of the system; and
- \* Proposals for the development of a credible warehouse receipt system.

The workshop identified that financial futures can readily be put in place with possible products being currency, interest rates and stock index futures. Commodity futures can be introduced later upon the setting up of a credible warehouse receipt system and grading standards, and by assisting in the licensing under the appropriate and existing regulatory framework private sector schemes designed to improve the warehouse receipt system and financial sector intermediation in commodity trade financing, thereby increasing the volumes of tradable commodities necessary for a successful exchange.

The workshop concluded that there is tremendous interest in the financial and commodity trading sectors, as well as in the government, as represented by the Bank of Ghana and the various Ministries and regulatory agencies, to warrant the commissioning of a detailed feasibility study to analyse further the technical, market and financial viability of the proposed Ghana Futures Exchange. A draft Terms of Reference for the feasibility study has been prepared as part of this report and attached as Annex A. Strategically, it was concluded that the possibility of the Ghana Futures Exchange being designed to serve the ECOWAS Regional Market should be explored with the feasibility study.

On the next steps to take in the development of the exchange, the following were recommended:

- \* Education of Stakeholders and the Public
  - Advocacy target groups from the policy-makers to undertake visits to the

Chicago Board of Trade for hands on experience with regulatory framework of a functioning exchange;

- Private sector advocacy target groups to undertake visits to the South Africa Futures Exchange to acquaint themselves with real world trading on an African futures exchange; and
- The Ghana Stock Exchange should consider purchasing the U.S. Series 3 Examination Kit for re-sale to futures market participants and stakeholders.

\* Advocacy for Commitment and Support

- Key Institutions to be involved are: Ministry of Finance, Bank of Ghana, Attorney General and the Registrar General Departments; and
- Involve advocacy target groups in technical committee planning and in the training and education programmes.

\* Strategies for Implementation

- Planning and undertaking education and advocacy strategies;
- Detailed feasibility study covering technical, market and financial viability of the proposed exchange;
- Development of infrastructure for the exchange, including regulatory framework, training of market participants and development of the warehouse receipt system;
- Establishing financial futures structures for stock index, bonds, exchange rates and possibly interest rates;
- Developing futures structures for maize, cotton, cassava chips, palm oil and possibly cola nuts.

# CHAPTER 1

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## INTRODUCTION

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The Ghana Futures Exchange Project was initiated in 1997 through a pre-feasibility study commissioned by the Ghana Stock Exchange with the financial support provided by FINSAP Secretariat. The scope of work covered in the pre-feasibility report included:

- The economic rationale for futures markets in Ghana
- The extent to which a futures market will support existing securities markets, particularly the Ghana Stock Exchange
- Description of the functioning of futures markets
- Identification of possible futures contracts that could be traded in Ghana

As the next major step towards the establishment of the Ghana Futures Exchange, the report recommended that a full-scale feasibility study be commissioned. Also, prior to and during the feasibility study, a significant education drive would be needed for the dual purpose of sensitizing consumers and producers, as well as the general public, to what futures markets are and their possible application within the Ghanaian context, and building support for the futures exchange project.

In furtherance of this objective, a workshop on the Ghana Futures Exchange was convened under the auspices of the Ghana Stock Exchange on June 10-11, 1999 at Novotel Hotel in Accra, Ghana. The programme for the workshop and the list of members for the technical planning committee are provided in Annex C and D respectively. The workshop was sponsored by the following institutions:

- Ghana Stock Exchange
- Securities Regulatory Commission
- Commodity Clearing House Ltd.
- USAID/Sigma One Corporation
- Bank of Ghana

The workshop covered the following topics:

- Overview of a Futures Market;
- Futures Market Regulation;
- Interventionist Policies in Agricultural and Financial Markets;
- Markets and Institutional Arrangements;
- Clearing and Settlement;
- Warehouse Receipt Systems.

The workshop was well attended by about 90 representatives from the banking and non-banking institutions, the agricultural sector, the Securities Regulatory Commission, the

Minerals Commission and others stakeholders. The list of participants is included in the Annex.

## **KEY ISSUES RAISED IN THE PRE-FEASIBILITY REPORT**

### **PRELIMINARY FINDINGS**

The pre-feasibility study indicates that although there is a potential for the trading of both commodity and financial futures contracts in Ghana, the results are very tentative. A preliminary review of the potential contracts that could be traded in Ghana considered commodities, metals and financial futures contracts with the following preliminary findings:

- The infrastructure requirements for the trading of futures contracts in commodities and metals are more onerous than for financial futures contracts.
- A credible system of commodity warehouse and a system of warehouse certificates, which would form the basis of delivery, needs to be in place before a commodities futures market could emerge.
- Appropriate grading standards for commodities need to be established.
- The existence of marketing boards with power to fix the domestic prices for several commodities does violate one of the key requirements for successful futures contracts, that is, market determined prices.
- Linkage with international markets would be hindered by exchange controls.
- With respect to agricultural products and minerals, cotton, shea nuts, palm oil and gold appear to have the best chance of success as futures contracts on a Ghana Futures Exchange.

On financial futures, the preliminary findings are as follows:

- The recent liberalization of the financial sector of Ghana and the introduction of free markets for interest rates and foreign exchange have created a conducive environment for the introduction of financial futures contracts. While borrowers worry about rising interest rates, depositors and holders of Treasury Bills worry about falling interest rates. A futures contract on interest rates benefits both borrowers and depositors.
- For importers, the existence of foreign currency contracts would help them minimize losses from currency depreciation, while exporters can reduce the volatility of their cash inflows.
- Equity Index Futures will assist in the development of the Ghana Stock Exchange as it will provide a medium for investors to minimize losses from market volatility and thus increase the interest of Ghanaians in equity investments.
- Further work on the development of futures markets should consider a staged development of futures trading with financial futures, such as foreign exchange, short-

term interest rate and equity index futures, receiving top priority.

#### **FUTURE WORK**

The report finds that there are a lot of issues to be addressed before the establishment of a futures exchange can become a reality. For example, a significant education drive would need to be undertaken to enable the public, market participants, etc. to understand the basics of the futures market and to accelerate its establishment. To this end, the identified steps to be undertaken after the pre-feasibility report are:

- The organization of a workshop to serve as forum to discuss issues pertaining to the establishment of a futures market and also to educate participants.
- The commissioning of a comprehensive feasibility study to look at all aspects relevant to the establishment of a futures market. For example, the potential products to be traded, legal framework, education of public and stakeholders, etc.

## CHAPTER 2

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### OPENING ADDRESS

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*Mr. Yebba Amoah, Managing Director, Ghana Stock Exchange*

MR CHAIRMAN, DISTINGUISHED LADIES AND GENTLEMEN

Let me add my voice to this workshop on the establishment of a futures exchange in Ghana. I have every belief that this would turn out to be a major milestone in Ghana's quest for an efficient financial system.

Why the futures exchange? Not too long ago, a financial sector adjustment programme as part of a broader economic recovery programme (ERP), with IMF and World Bank support, was initiated. At that time our financial system had become dysfunctional as a result of state control, as well as bad policies and regulations. Most banks were unprofitable, interest rates were meaningless, and there was no market for securitized finance.

Today the story is much different. Although the process of financial reform is an on-going one, and we still have much to do, we have a system that is much different from what we had twelve years ago, and the milestones are well known. These include strengthening of regulatory environment through the passing of various laws (banking law, securities industry law, non-banking financial institution law) the setting up of a functional stock exchange and the partial freeing of the market for government treasury instruments. These are significant achievements, but the very success of these efforts has created new risks.

Importers and exporters and financial institutions are now exposed to the hazards of unpredictable foreign exchange movements. The liberalisation of interest rates has also created risks for investors and financial institutions, which have to worry about sudden interest rate changes on their finances. This situation also applies to borrowers who have to deal with the impact of real interest rate changes on their cost of funds. Lastly, but not the least, investors have to worry about the impact of fluctuating asset prices on their portfolio.

The madness of price fluctuations has been with us for a long time. As an agricultural and resource based economy, the price of cocoa and gold on international markets and, locally, the production of such staples, such as corn, have suffered from price instability.

When you put everything together, our economy has suffered from risks associated with price fluctuations of commodities which we never quite had the means to deal with. Today additional risks have emerged in the market, resulting in an increase in business uncertainty, a serious disincentive to savings and investment. Unless mechanisms are found to contain these risks, we would not be able to achieve the 20% investment rate and 8% GDP growth rate needed to achieve the goals of Vision 2020.

It is against this background that the Ghana Stock Exchange in 1996 commissioned a pre-feasibility study on the establishment of a Ghana futures exchange, with funding from

FINSAP secretariat. The pre-feasibility identified the preliminary issues to be addressed in setting up a futures exchange. The purpose of this workshop is for various stakeholders to discuss the conclusions of the study. We hope that this workshop would review ongoing practices and build consensus between various stakeholders and opinion leaders to ensure the requisite ownership, commitment and support needed to establish a viable futures exchange.

As organizers, our expectations are that at the end of this workshop we would have:

1. Attracted sufficient attention for stakeholders and government on the need for such an exchange;
2. Established the benefits to be derived from such a project; and
3. Identified the issues that need to be addressed in a step-by-step holistic approach.

Currently a number of issues are being pursued for further development and consolidation of the capital markets. One could mention the long term debt project and the pool funds project, under which we hope to have unit trusts and mutual funds as part of the products. Another is the automated trading, clearing, settlement and depository facility, not to mention having a real time gross settlement regime (RTGS). These are some of the reasons why some of us think that the proposed futures market is a logical sequel in the effort to make the capital market more efficient in support of national economic goals.

The futures markets would make it possible for businesses, financial institutions and investors to hedge their risks by taking positions in these futures. I am not unmindful of the caveat that a highly placed government official made some years ago when I first brought up this subject. He drew my attention to Orange County and put some cold water on it for a while. I want to say that fear can be useful, but it can also be destructive. We should not let the discussion be thwarted by undue phobia. I feel that such fear can be destructive. We at the exchange and the sponsors are looking forward to a free, frank and unbiased discussion among policy makers and other stakeholders on this project. It is my hope that we can move to a consensus that would be in the best interest of Ghana, to move this economy along the path of growth and prosperity, by helping address the problems faced by the commodity producers, financial institutions and investors.

Let us debate, but not drag out the issues. I have no doubt about the competence of the resource persons that have been recruited for this workshop. I will appeal to them that they should pitch discussions in a way that we lay men can understand. To the external resource persons from other parts of the world, we would like to welcome you sincerely. We have no doubt that you have started enjoying Ghanaian hospitality already. We hope that when you next visit us we will have a functional futures exchange.

Thank you.

## CHAPTER 3

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### KEYNOTE ADDRESS

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*The Governor of the Bank of Ghana*

Mr. Chairman, Dr. Charles Asembri, The Managing Director of Ghana Stock Exchange, distinguished workshop faculty and participants, ladies and gentlemen:

As far back as 1996, a team of consultants undertook a pre-feasibility study on the establishment of a Ghana's futures exchange. The study identified many pressing issues to be addressed by a more comprehensive feasibility study. As a prelude to this feasibility study therefore, the Ghana Stock Exchange, in collaboration with other institutions as already mentioned here, have organized this workshop. We have already been told that the workshop would discuss the issues arising from the pre-feasibility study on development of a futures exchange in Ghana.

As you are aware banks, producers, traders, investors and in fact, all business are faced with risks in their various daily activities. Such risks vary in nature and include interest rate risks, exchange rate risks and risks arising from price fluctuations etc. Risk takers try to contain such risks within acceptable limits; and in order to deal with the uncertainties associated with their transactions, they use forward contracts. In Ghana today, forward contracts are mainly tailored to meet the needs of the contracting partners. These transactions are not standardized and there is no market place for trading such forward contracts.

Mr. Chairman, futures are forward transactions, which are traded on exchanges, to make forward transactions marketable on an exchange as futures; they are standardized in terms of quantity, settlement date and quotations. Futures exchanges have the capabilities to trade not only in traditional goods and metals, which are normally known as commodity futures, but also in financial forward contracts, also known as financial futures, and also in products such as bonds, interest rates, currencies and stock indices. It is pertinent to mention that this workshop is being organized at an opportune time. Last year, forward foreign exchange transactions were introduced into the Ghanaian financial market. On the whole, transactions have been encouraging, but rather low. This is partly because the products dealt in are not standardized, and there is no market for trading in those forward transactions.

The introduction of a futures exchange in Ghana would bring with it innovations in the futures products, both of the commodities and financial types. The availability of the futures exchange would make forward contracts more tradable and, in turn, improve business performance by affording Ghanaians and institutions a greater opportunity of hedging against some of the risks which are presently causing havoc to the meaningful planning of business activities. The Bank of Ghana looks with great interest at this development, and we are hoping that it would further widen and deepen the financial market.

Mr. Chairman, as stated earlier, this workshop on the development of the futures exchange is expected to provide a forum for participants to exchange ideas and share

experiences that are relevant to the formation of a futures exchange, as well as identify problems that may hamper its formation. To achieve this aim, the workshop will have the following sessions.

- Overview of a Futures Market
- Futures Market Regulations
- Interventionists Policies in the Agricultural and Financial Markets
- The Practicalities of Establishing a Futures Exchange
- Warehouse Receipts Systems.

Mr. Chairman, it gives me the pleasure to inform you that we have an array of capable and very experienced people to present papers at this workshop and we are confident that with the vast experience and high responsibility levels reflected in the credentials of the presenters and chairpersons all the issues requiring attention would be tackled. We are also hopeful that by the end of this workshop additional issues would have been added to those already identified from the pre-feasibility study. The workshop attendants should also do well to use the time here to forge new professional relationships, which would be of mutual benefit in the future.

Thank you.

## CHAPTER 4

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### AN OVERVIEW OF FUTURES MARKETS

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*Dr. Sam Mensah, Technical Advisor, CIDI Securities Ltd.*

The presentation of an overview of the futures markets covered the following topics:

- Types of Trading Contracts
- Definition of a Futures Contract
- Mechanics of Trading
- Types of Futures Contracts
- Market Participants
- Hedging with a futures contract – an illustration

#### TYPES OF TRADING CONTRACTS

There are generally three types of contracts – cash (spot) contracts, forward contracts and futures contracts. Cash or spot contracts are contracts where products are delivered immediately. Such contracts are traded at spot prices and payments are made on the spot. Forward contracts are agreements to buy or sell an asset at a certain time in the future for a certain price. The definition implies that forward contracts are deferred delivery and the contract price is fixed at the time of the agreement. These contracts are not traded on an exchange. Examples of forward contracts are currency forward contract and forward rate agreements. Forward contracts have certain disadvantages listed as follows:

- Parties must trust each other to complete the contract. This means that default is possible. For example, a bank may go bankrupt before delivery date of contract.
- Difficulties of finding a trading partner. Suppose a sum of \$100,000 was expected in a year; is there a bank willing to commit to a cedi price for that sum today?
- Difficulties of fulfilling contract without delivery. For example, an exporter expecting payment from the US may change his mind and would want to deposit the funds in a US bank. Unless the bank in Ghana holding the forward contract agrees, this is not possible.

The third category of contract is the futures contract, which is the subject of this presentation.

#### DEFINITION OF A FUTURES CONTRACT

Futures contracts are designed to overcome some of the weaknesses of forward contracts enumerated above. It is similar to forward contracts in that it is also an agreement to buy or sell an asset for a certain price at a certain time in the future. However, a futures contract differs in the following ways:

- It is a standardized transferable contract. These standardized transferable contracts are

traded on an organized exchange. For example, contract size for corn can be say 5,000 bushels of corn with several delivery dates given, such as June, August, October, etc. Because these contracts are standardized, it is very easy to buy or sell some underlying item for a specified delivery date.

- The contract provides a mechanism to allow holders to complete his/her obligation at any time during the life of contract.
- Performance is guaranteed by a clearing house.

A buyer has a long position when he/she agrees to take delivery at a currently determined market price. A seller has a short position when he/she agrees to make delivery at a currently determined market price. The vast majority of the futures contracts that are initiated do not lead to delivery. The reason is that most investors choose to close out their positions prior to the delivery period specified in the contract. Closing out a position involves entering into an opposite trade to the original one. Many contracts are cash-settled and so there is no need to deliver cocoa, currency or any other underlying product. The buyer and seller exchange payments based on changes in the price of a specified underlying item or returns of an underlying security.

#### **THE CLEARING HOUSE**

The Clearing House is an adjunct of the exchange and acts as an intermediary in futures transactions. Original parties to the contract never deal with one another again. Their contractual obligation is with the clearing house. The clearing house accomplishes 3 objectives:

- It guarantees the performance of the parties to each transaction.
- Because of the guarantee, there is no need to perform credit checks on the buyer or the seller.
- It makes possible reversing trades.

#### **CATEGORIES OF FUTURES CONTRACTS**

Futures contract can be broadly categorized into two groups:

- Commodities Contracts
  - Agricultural (corn, cocoa)
  - Metal (copper, gold, silver)
  - Energy (crude oil)
- Financial Contracts
  - Financial Instruments (T-bills, T-Bonds, Stocks)
  - Currencies
  - Indexes

An example of a futures contract is shown below:

#### COCOA FUTURES CONTRACT

LIFFE Contract Specification – Cocoa

Unit of Trading	10 tonnes
Delivery Months	March, May, June, September, such that 10 delivery months are available for trading
Tender period	Any business day of the delivery month at 15:30
Price Basis	Pounds sterling per tonne in an Exchange Nominated Warehouse in the UK., or in a Nominated Warehouse in, or in the Board's opinion, sufficiently close to Amsterdam, Antwerp, Bremen, Dunkirk, Hamburg or Rotterdam
Tick Size (& value)	1 pound per tonne (10 pounds)
Trading Hours	09:30 – 11:55 and 13:30 – 16:55
Origins Tenderable	Ghana, Cote d'Ivoire, Nigeria, Sierra Leone, Togo, Cameroon, Equatorial Guinea, Democratic Republic of Congo, Western Samoa, Grenada, fine Estates, Trinidad & Tobago Plantation, Jamaica at contract price. All other grades tenderable at set discounts.

#### MARKET PARTICIPANTS

There are three groups of people who participate in the futures markets. These are:

- Hedgers - These are market participants who invest in futures to reduce the overall risk of their portfolio.
- Speculators - This is another group of market participants who undertake risky investments with the objective of earning greater profits than investment in risk-free alternatives.
- Arbitrageurs - These are market participants with a zero-risk trading strategy that involves taking advantage of a fact that two or more securities are mispriced relative to each other.

#### REASONS FOR TRADING IN COMMODITY FUTURES CONTRACT

There are several reasons for trading in commodity futures. Some of these are:

- Producers protecting the value of production from falling prices
- Consumers wanting to hedge against rising prices
- Speculators attempt to profit by guessing the direction of the market without having a position to hedge.

## REASONS FOR TRADING IN FINANCIAL FUTURES CONTRACT

Some of the reasons for trading in financial futures contract are as follows:

- Borrowers, lenders and other users of financial markets want protection against fluctuating values of financial assets.
- Price changes of financial instruments include:
  - interest rates
  - foreign exchange rates
  - stock market prices
- Speculators can profit from anticipated changes if they are correct in anticipating the direction and magnitude of the price changes.

### AN EXAMPLE OF A "PERFECT" SHORT HEDGE

Suppose in April a farmer is anticipating a wheat harvest of 40,000 bushels and the current spot price of wheat is \$3.67 per bushel. The value of the farmer's cash market position is  $\$3.67 * 40,000 = \$146,800$ . To protect the farmer from falling prices, the farmer can take a short position by selling 8 futures contracts amounting to 40,000 bushels at \$3.86 per bushel with November as the time of maturity. In this case the value of the futures position is  $\$3.86 * 40,000 = \$154,400$

If in November the farmer closes his short position in the cash market with price per bushel being \$3.52 by harvesting 40,000 bushels of wheat, then the value of the closing trade is  $\$3.52 * 40,000 = \$140,800$ . This means that he registered a loss of \$6,000 ( $\$140,800 - \$146,800$ ). On the other hand, If he closes his short position in the futures market by purchasing 8 futures contracts at \$3.71 per bushel, the value of his closing position is  $\$3.71 * 40,000 = \$148,400$ . This means that he will have a profit of \$6,000 ( $\$154,400 - \$148,400$ ) from the futures trade. In all, his loss in the spot market is equal to his gain in the futures market.

In practice, futures hedges are not perfect for a number of reasons. The first is that because contracts are standardized, the hedger may be under or overhedged. In the above example, if the wheat farmer harvested 43,000 bushels of wheat, he would have been underhedged because the standard futures contract would only allow him to buy contracts covering 40,000 bushels. Second, the prices in the futures and spot markets may not move in perfect correlation – a situation technically called "basis risk". In the above example, both the futures and spot prices decreased by \$0.15 per bushel. This is not always the case.

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## OVERVIEW OF A FUTURES MARKET

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*Mr. David Stuart Rennie, Former General Manager/Commercial Union Investment Management  
(South Africa)*

"Futures are often seen to be complicated yet their basic appeal is elementary" - The Economist.

Futures contracts call for delivery of an asset at a specified delivery or maturity date, for an agreed-upon price, called the futures price, to be paid at contract maturity. It can be classified into commodities, currencies, short-term interest rate and long-term interest rate futures. For a futures market to function efficiently, there are some conditions which must be fulfilled:

- Liquidity - the standardization of futures contract and the existence of a clearing house ensure liquidity.
- Volatility - the price discovery mechanism results in fluctuations in futures prices.
- Security - the clearing house and the margining system protect participants from default.
- Transparency - regulations and control of the exchange ensure price transparency.

From the economic perspective, the functions of futures exchange can be summarized as follows:

- Competitive price discovery
- Hedging of price risk
- Allocation of resources
- Financing of inventory

### MARKET PARTICIPANTS

Markets participants can be categorized into four classes - hedgers, speculators, arbitrageurs and investors.

#### THE HEDGERS

These are market participants who invest in futures to reduce the overall risk of their portfolio. When price risk is identified, these hedgers make decisions on where, how and how much to hedge. Some of the reasons for hedging include protecting profit margin, stabilizing cash flow, achieving price certainty, diversifying holdings, reducing transaction costs, decreasing cost of storage and minimizing inventory capital required.

#### SPECULATORS

This is another group of market participants who undertake risky investments with the objective of earning greater profits than investment in risk-free alternatives. There is a lot of science involved in speculation and not just risk taking. Examples of speculators are scalpers, day traders, position traders and spreaders.

### **THE ARBITRAGEURS**

These are also market participants with a zero-risk trading strategy that involves taking advantage of the fact that two or more securities are mispriced relative to each other. In this context, an arbitrageur can exploit mispricing between spot and futures contracts or between futures contracts with different delivery dates.

### **THE INVESTORS**

Another group of market participants who invest in the futures market for the purposes of asset allocation and also tradability.

### **BASIC FUNCTIONS OF THE EXCHANGE**

A well-functioning futures exchange has the following functions:

- Creating infrastructure for buyers and sellers
- Setting and enforcing trading rules
- Providing arbitrage resolution framework
- Collecting and disseminating information relating to the market and prices
- Eliminating counter-party risk

### **ELIMINATION OF COUNTER-PARTY RISK**

Because of the existence of a clearing house to guarantee performance, buyers and sellers of futures contracts do not have to worry about performance of payment and delivery obligations of the counter-party to the contract.

### **MEMBERSHIP STRUCTURE**

The membership structure of an exchange is such that we basically two types of members - the clearing members and the non-clearing members. The non-clearing members consist of the broking and the non-broking members. The clearing members are required to fulfill a capital requirement set by the exchange. Broking and non-broking members, however, do not fulfill any capital requirement, but are issued licenses to trade in the market.

## SUMMARY OF GROUP DISCUSSION

The discussion on this session was very brief, partly because most of the issues raised were deferred for later sessions which would seek to address the issues in a more detailed manner. The salient point made at this discussion pertains to the pre-conditions that must exist for the establishment of a futures exchange.

**Question:** What are the pre-conditions which must exist for the establishment of the futures exchange in the country?

**Answer:** Two conditions must prevail in the country for the smooth running of the futures market:

- There must be stability of the exchange rate. There should be micro-economic maneuvers to stabilize prices. If the exchange rate is not stabilized, it will erode capital gains.
- There should be the open-market system of operation. In other words, there should be a transparent system.

**Questions:** Are we going to have a separate body to control the quality control aspect of the commodities to be traded?

**Answer:** The clearing house will be responsible for the quality control issues of the commodity market. In Ghana, the Ghana Standard Boards are in the process of standardizing the grades for the major agricultural products. The clearing house can work in conjunction with the Ghana Standard Boards on issues pertaining to quality.

## CHAPTER 5

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### PRINCIPLES OF REGULATORY FRAMEWORK – THE UNITED STATES PERSPECTIVE

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I am hoping that the value I can provide here at this workshop is in describing briefly some of the principles of the regulatory framework underlying a commodity exchange.

Firstly, a basic choice needs to be made in setting up a system of rules. This choice is about what the principles are going to be concerning the bodies that are going to regulate futures trade. On this basis, we would have to decide whether:

- The Futures Exchange has to be regulated by the Exchange itself (self-regulatory), or by the Clearing House.
- The Clearing House should be part of the exchange, or be independent from the Exchange.
- A Regulatory body should be simultaneously set up as the Exchange is put in place or wait until the exchange is set up and running for some time before a federal regulatory system, equivalent to the United States Commodity Futures Trading Commission (CFTC), is started.
- The independent Regulatory Agency should be separate from the Securities Regulatory Commission or combined with the Securities Regulatory Commission.

We have different models for these systems in the US. For example, the CFTC regulates futures contracts, but not securities. Recently, there has been a great deal of controversy about whether this body should also regulate other types of financial instruments, such as options and derivatives. We have a separate commission for securities, and there have been efforts to try and merge these into a US Securities and Futures Exchange Commission.

There are arguments on either side. On one hand, there are arguments in favor of futures contract being very different from securities in terms of what the underlying commodities tend to be and how the markets work. On the other hand, any financial contract has similar issues when it is traded on an Exchange, and therefore all such instruments should be treated the same. Obviously, there are efficiencies associated with combining securities and futures regulation.

In the US, we have an intermediary between the Exchange and the CFTC – the exploratory organization. This serves as a bridge between an Exchange and the full-fledged federal agency. It deals with the day-to-day working of the Exchange and other issues, such as membership registration, processing of applications, etc. These bodies – the Exchange, the exploratory organization and the federal supervisory body have rules that overlap in a number of areas or are somewhat different. Thus, as we think about what makes sense in

terms of just an exchange, a clearing house or federal regulator, we need to think about what the purposes are of different types of regulations. These purposes can be divided into three categories:

- Regulation which ensures the high quality of participants in the exchange.
- Rules that help to protect the integrity of the market.
- Rules governing defaults (includes the clearing mechanism alluded to earlier).

### **Rules Governing High Quality of Participants**

It is essential for whoever is devising the rules for the exchange to know that there are rules for the approval of institutions and/or individual participants on the exchange. The different US exchanges vary in the rules as to whether institutions or individuals can be members of exchanges or individuals can be members, but only as representatives of institutions.

In all cases, there are capital and margin requirements that apply to members. There are amounts of initial and varying margins from customers of the exchange. There is also a system of approval for the Brokers on the exchange which in the US are called Futures Commission Merchants (FCM). There is a system of examination for these participants – Floor Brokers or Traders or Persons associated with other types of participants in the futures markets called Associated Persons.

There are requirements for approval for what is known as commodity pool operations. These are really for people who run funds (funds to invest in the futures contracts). Once the futures exchange is established there are those who would want to invest in these futures as part of investment management accounts. For example, banks advise their clients to buy these futures as part of their portfolios. In the US, such advisors on futures markets would have to pass an examination to show that they are knowledgeable about futures and their associated risks. These advisors are also required to give adequate disclosure to their customers of what the futures trading risks are.

In terms of capital requirements being violated and other integrity issues, there are a whole series of disciplinary proceedings to address such breaches. There are proceedings by the exchange, by the regulatory body and by the federal body.

### **Rules Protecting the Integrity of the Market**

One of the most common US types of rules designed to protect the integrity of the market are anti-fraud laws. We have laws against defrauding or cheating any member of the exchange and also against making false statements or reports on transactions. These laws are broadly worded and it is hard to know how under any system of laws it could be ordered otherwise. However, in practice it becomes apparent when a fraudulent activity has taken place and there are procedures to address that.

Under US laws for example, it is illegal for a member of an exchange to take positions on

the other side of an order by a buyer or seller without their consent. This is because there is an inherent conflict of interest – is the broker going to time the market or make trade in a way that would be most efficient for the buyer/seller or for him? This is called the principal trade.

There is also what is called agency cross issues. A portfolio manager handling a family of investment funds (3 or 4 funds within the same group) may decide to shift the futures contract of one fund to another without it passing through the exchange. This action may defeat one of the purposes of the futures markets where transparency concerning what the price is and who has what (price discovery mechanism) should exist. In the above example, if there was to be a shift of ownership of futures position without it going to the floor of the exchange and these funds are owned by different people, there will be a change of ownership that would not be reflected on the floor of the exchange itself.

There is therefore a requirement in the US (with some exceptions) that there are no pre-arranged trades and that trade be effected on the floor of the exchange or at least be exposed to some element of price risk. This requirement is to protect participants, but is also directed at price discovery.

In addition to these anti-fraud restrictions, there are also anti-manipulation restrictions. The idea is that we do not want to allow anybody to corner the market in a way that makes the market not reflective of the true price of the futures contract and therefore the underlying commodity. One of the systems used in the US is a large trade reporting system, such that anyone who buys a position in futures contract above a certain level has to make a filing with the commodity regulators. The essence of this regulation is that it gives regulators the opportunity to investigate any large trading position at will. This was a system that was put in place at the time when US regulators were concerned about the apparent effort by the government of a particular country to corner the market in a particular grain. Such suspicion has not arisen since, but the rule remains as a precautionary measure.

There is also what is called speculative position limits in certain commodities. For such commodities, one is not permitted to hold positions above certain levels.

It is also very important for brokers or managers running funds using futures accounts to provide adequate disclosure to clients as to what the risks are of these contracts. In the US, we have a prescribed risk disclosure statement required to be given to customers before an account is opened or a trade is made.

### **Rules governing defaults**

The third category of regulation that we need to think about as we are thinking of formulating an exchange is how we draft regulations that specify what happens when a member defaults. This is the clearing house system that we alluded earlier. Different exchanges tend to have different and very specific rules about hierarchy of funds that are used to make good obligations if a clearing house member defaults. These funds may be clearing fees or guarantee funds that clearing members are asked to contribute to. Rules are therefore needed to clarify at what point the guarantee fund is called upon. In case the guarantee fund were exhausted for some reasons, the exchange or the clearing house

must have the ability to call on other capital of the clearing members to make good their obligations; otherwise it defeats the purpose of the exchange.

Apart from the above-discussed issues, there is also a principle of regulation that is self-regulatory – risk management by participants. The Barings Bank experience has brought to the fore the fundamental principle of risk management; and that is separating the front office from the back office.

In conclusion, care must be taken in choosing the right legal framework and rules that would be workable in the Ghanaian context. This must be supported by an information dissemination campaign, which forms part of a general education exercise of market participants and other stakeholders aimed at ensuring that the rules of the game are properly understood.

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## LEGAL FRAMEWORK FOR THE REGULATION OF A FUTURES MARKET

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*Eudora Hilda Quartey, Deputy Director General, Securities Regulatory Commission.*

### INTRODUCTION

This paper will deal with the salient features of what is needed for effective regulation of the Futures Market, particularly

- Appropriate statutory regulations
- The detailed rules and regulations required
- Accounting and tax matters for futures exchange activity

### Appropriate Statutory Framework

Do we have any existing legislation in Ghana upon which to build or should we develop an independent Futures Market Framework? A quick review of the Securities Industry Law PNDC Law 333 will answer this question.

### SECURITIES INDUSTRY LAW, PNDC LAW 333

Currently, the legislation in Ghana for regulating the operations of the Capital Market is the Securities Industry Law – PNDC Law 333. It may be assumed that this piece of legislation may contain sufficient provisions to empower the regulating authority created by the Law, that is the Securities Regulatory Commission, to approve and regulate the operations of a futures exchange. This might not actually be the case.

The provisions of the PNDC Law 333 provide extensively for the functions of the SRC. In all these, the word that is common to the listed functions is “securities” – where the SRC is to have regulatory powers over anything related to securities and the conduct of securities business in Ghana.

“Securities” is defined in the Interpretation Section of the Law as follows:

- a) shares or debentures within the meaning of the Companies Code, 1963 Act 179);
- b) bonds or other loan instruments of the Government of Ghana or any other country;
- c) bonds or other loan instruments of a corporation established under an enactment for the time being in force;
- d) rights or interests (whether described as units or otherwise) under any unit trust;
- e) such other instruments as the Secretary may by notice in the Gazette prescribe.

Clearly, as the law stands now, unless the Secretary (Minister of Finance), by notice in the gazette, prescribes other instruments as ‘securities’, as provided in (e), then the SRC

will not have regulatory jurisdiction over Futures Contracts, as the definitions in a) to d) do not cover futures contracts.

### **WHERE DO WE GO FROM HERE?**

Obviously PNDC Law 333 does not have specific provisions for the regulation of the futures market; either it will need to be amended to include Futures Trading Activity or separate legislation will need to be passed.

The literature on the regulation of futures market, especially that of emerging economies, is consistent on one point; that there is no single optimal model for the market structure or regulatory framework. The experiences of different markets have emphasized this point, that there is no single optimal model.

In the Philippines, quite a few companies were trading in futures contracts outside the Philippines before the establishment of a futures exchange, for which there was no regulation in place, although there was a Securities and Exchange Commission. As the trading activity increased, it was decided that it was time a Futures Exchange was established, with regulatory powers vested in both the SEC (for commodity futures and claims by clients against registered dealers) and the Central Bank (for financial futures trading).

What is common to most countries that have futures trading is that legislation has aided the establishment and development of the futures markets. In the United States of America, the regulatory authority of the securities industry is the Securities and Exchange Commission (SEC). The Chicago Futures Trading Commission (CFTC) was established pursuant to the provisions of the Commodity Exchange Act of 1936 to take control over future's trading, etc.

(Unfortunately, the legislation which created the CFTC created ambiguities in the definitions of some of the products to be traded, as a result of which the CFTC and SEC have engaged in a long running battle, with SEC claiming jurisdiction for some matters and CFTC claiming jurisdiction over the same issues).

The establishment of a Futures Regulatory Body, vested with supervisory and enforcement powers, seems to be one way of starting a futures market in Ghana. However, considering the small size of the market, an alternative to a separate regulatory body is an appropriate legislation that empowers the SRC to perform the regulatory function. The US SEC experience demonstrates that this arrangement is workable.

It must be remembered that derivative activity is significantly different from trading in the underlying asset or instrument, and must therefore be regulated differently.

The enabling legislation would give effect to futures trading and establish the appropriate regulatory agency with the following powers:

- i) registration of the futures exchange, clearing house, and market participants. It would be important to ensure that the participants are all financially and

professionally sound enough to participate in the market. Ensuring availability of adequate trading facilities would also be part of the mandate of the regulatory body:

- ii) protection of the market from abuses, such as illegal, deceitful and manipulative practices;
- iii) promotion of market integrity, ethical and professional standards, supervision of the activities of the exchange, the clearing house and its members;
- iv) promotion of the orderly growth and development of the futures market;
- v) providing policy advice to relevant government agencies on matters concerning futures trading.

In pursuance of these powers, the regulatory body would have authority to draw up detailed Rules and Regulations with very high standards for competence and compliance requirements. This is crucial in setting the tone of the new market and as a means of ensuring the promotion, growth and development of the market.

#### **Detailed Rules and Regulations**

- i) Approval and licensing criteria for the Futures Exchange and all the categories of market participants; e.g., the Futures Exchange should be a body corporate, incorporated under the provisions of the Companies' Code (1963) Act 170 – with details of the levels of qualifications of its directors and management, and financial requirements for each as appropriate.
- ii) Membership rules that would determine who has the right to be a member of the exchange; how places (seats) on the exchange are to be acquired and transferred; and the appropriate levels of financial requirements for each category of membership.
- iii) Trading systems of the exchange which would determine the actual operations of the exchange. The physical facilities available for trading on the exchange; the trading hours, trading methods and documentation, and clearing system.

Trading can range from the traditional open out-cry system, which entails the public auction of futures contracts or a partial or fully automated trading system. A fully automated trading system may not be advisable at the early stage of the development of the exchange. The extent and cost of resources that would be needed in terms of capital and technology would make the set up cost rather prohibitive for the exchange.

These costs would be better applied to public education, marketing of the futures concept and training of both commission and exchange staff. A certain level of automation would be useful, however, to enhance the speed of concluding trade and the accuracy of market information as early means of fostering the development of the market.

- iv. Regulation of trading itself must be aimed at reducing market abuses and promoting efficiency, integrity, fairness and customer protection.

The main abuses to be regulated against are:

- manipulation
- insider trading
- unauthorised trading practices
- unauthorised sales practices
- reporting violations
- Other matters to be included in the rules would be Ethics and Conduct of the Traders, Dispute Resolution, Fidelity Fund, Listing of Financial Instruments, the Contract Specifications of the instruments to be listed and Disciplinary Matters.

## **MANIPULATION**

Manipulation is any form of unauthorised price rigging, which usually arises when one entity has excessive control over either the supply or demand or a high level of physical inventory and can therefore attempt to profit by forcing pricing away from normal supply and demand conditions. Rules against manipulation would be set to make manipulation an offence and to ensure the efficient and fair pricing of the contracts.

A fine balance must be found which will protect users, yet encourage activity. Excessive regulations may result in stifling the market which depends on a certain level of speculative activity.

## **INSIDER TRADING**

The definition of an "insider" in the Futures Market may be difficult to achieve. Insider trading occurs when a person uses unauthorised proprietary information to achieve a profit. Because most often the traders are involved in and get to know of the transactions which will cause a rise or fall in price and seek to hedge against the event, they could be perceived as being involved in insider trading. It is through supervision and monitoring and compliance measures that this can be regulated.

## **UNAUTHORISED TRADING PRACTICES**

Unacceptable trading floor practices, such as fictitious sales and trading against customers' orders, are examples of unacceptable trading practices, which will need to be defined and prohibited. These are usually various types of fraud committed by brokers against their clients. Typically these are:

## **Unauthorised Sales Practices**

- Guaranteeing of profit.
- Giving market advice that does not have reasonable basis.
- Fraudulent claims of trading expertise.
- Excessive trading (churning) of client accounts to generate commissions.
- Failure to disclose the risks involved in futures trading.

## **REPORTING VIOLATIONS**

Reporting violations occur when traders and brokers do not report the true picture or nature of their activities to the exchange. For example, misleading reports on the size of their activities and violations of position limit requirements.

Effective regulation, monitoring and supervision of the market will depend on the standards for reporting required from market operators.

The rules on reporting must be strict, and compliance to these must be observed.

## **THE CLEARING MECHANISM**

Every futures exchange has associated with it a clearing house whose role is to ensure the operational and financial integrity of all trade that take place on the exchange. The clearing house, itself an independent limited liability company, would be owned by the clearing members of the exchange.

As part of the regulatory and enabling framework, the legislation must provide for the clearing mechanism, through which all transactions take place. The clearing mechanism ensures the completion of the obligations on both sides of the transaction; its efficiency and effectiveness would raise the confidence of the users of the market. Because the clearing house guarantees the financial integrity of the futures contracts, the clearing house itself must be strong.

The regulations must provide for the levels of:

- Margin deposits (to be paid in by members)
- Guarantee funds
- Surplus funds

The margin levels which are to be paid by each clearing member are set on a daily basis assessed on the maximum movement expected each day. Clearing members, in turn, collect margins from their customers to assure their customers' performance under the contract.

Once a price has been agreed upon between a buyer and a seller of a futures contract, the

clearing house intercedes and becomes the buyer to the seller and the seller to the buyer. The contractual consequences of this arrangement and the obligations of the parties must be clearly stated to enhance the use of the clearing system.

Adequate and enforceable regulations are indispensable for protecting the market's integrity. A few emerging markets have had their images tarnished as a result of market manipulation and fraud. Consequently, this has driven away potential investors from the market. A fine balance will need to be drawn between establishing onerous regulations (which would stifle growth) and the appropriate level of regulation to enhance the market.

### **The Futures Exchange and its Operations**

The Futures Exchange itself must be a self-regulatory body, with rules mirroring those of the guidelines set by the Futures Commission. The Commission would require evidence of such rules being in place at the time of submission of its application for approval and licensing.

### **Other Legislative Considerations**

In order to make the new products of futures trading feasible, the following legislative matters would have to be considered:

Laws on gambling and speculation:

- To exclude futures trading as gambling or speculative ventures.

Laws on foreign exchange repatriation:

- Currently the legislation on foreign exchange allows foreign and non-resident owners of securities to be registered as owners, thereby guaranteeing their right to transfer their capital gains and or dividends. This could be extended to cover futures trading profits, at least for a period to further enhance the acceptability of the product.

Laws on Bankruptcy (Insolvency):

- The existing laws on insolvency will need to be updated to reflect international financial trends in this area. This would enhance international participation in our markets, as the ground rules for this important area would be clear.

Laws on Dispute Resolution

- The Arbitration Act (Act 38) will also need to be amended to make it more current, if it is to be used as an acceptable tool for dispute resolution for disputes arising in connection with trading on the

## Futures Exchange.

### The Judicial System

- It will be particularly important for the legislation to provide unambiguous provisions to make the contractual and commercial relationships created under a futures trade clear. Actionable situations ought to be provided for.

Additionally, provisions on the activities that would constitute criminal offences must be included.

It may be the time to advocate strongly for the setting up of a specialised Commercial Court or Financial Court, which has been talked about often, and is long overdue.

The court would have its own procedures and rules and enforcement powers which would enhance faith in the ability of the judicial system to deal expeditiously with new issues consequent upon the development of our financial market.

Participation in the market will be improved when people believe the law has made provision for the speedy enforcement of their rights.

### Education

It has been recognised that financial markets and new products develop and grow through the practical experience of market participants. There should, therefore, be strong emphasis on educating and training market participants. This should be part of the regulatory framework with regards to the licensing of participants such education and training should be directed at:

- exchange staff
- regulators
- member firms and their respective staff
- commercial users and individual of the brokerage houses

In South Africa, for example, under the Financial Markets Control Act 1989 (Act No. 58 of 1989) and the Stock Exchange Control Act 1985 (Act 1 of 1985):

**“the rules of a stock exchange or financial market should provide to the satisfaction of the Registrar of Financial Institutions that a member of such exchange or market complies with the minimum requirements with regard to experience and training.”**

This provision makes education and training a regulatory matter from which we could

draw some example for our own use.

Further to this, there has been established an Institute of Financial Markets affiliated to a similar institution in the UK, which sets the examinations required.

It should be possible for the current Stock Exchange Courses to be likewise structured with additional courses to enhance the professional requirements of our practitioners in all spheres of financial activity outside the Banking sector.

### **Accounting and Tax Treatment of Futures Trading**

Derivative instruments, in general, represent rights or obligations that meet the definitions of assets or liabilities, and should therefore be reported in financial statements. However, the accounting treatment of derivatives, such as futures contracts, is complicated by the variety of forms that it can take: a contingent obligation from a balance sheet perspective, but an actual obligation from a profit and loss perspective.

The daily mark-to-the-market of futures means an immediate recognition of profit and loss situations, while there are no assets in terms of ownership, that could be correspondingly shown on the balance sheet.

If financial statement disclosures are intended to provide users with information that will enhance their understanding of the significance of "on-" and "off" balance sheet instruments to the enterprise's financial position and performance, then it should include notes on instruments used, associated risk and business purpose served.

Fair value is the most relevant measure for financial instruments. Adjustments to the carrying amount of hedged items should be made to reflect changes in their fair value. The general principle is that gains and losses must be recognised as they occur on a mark-to-market basis, unless the instrument qualifies as a hedge. Speculative futures positions, however, require no special disclosure in the financial statements.

### **TAX TREATMENT OF FUTURES CONTRACTS ACTIVITY**

Before futures contracts are introduced in Ghana, the tax laws to govern such transactions would need to be clarified.

Currently, the tax laws are relatively clear on capital gains. Under the laws, there is a 10% withholding tax on dividend income for all investors, both resident and non-resident. Capital gains on listed Securities are, however, exempt from tax until November 2005.

If futures contracts are to be attractive and have a considerable patronage of the business community, then the tax concession should be extended to futures transactions. That is, to encourage trading in futures as an attractive investment vehicle, it might be practical to reduce tax on profits from trading, in the same way that the profits from gains on stock values on the stock exchange are exempt from capital gain tax.

However, it is by no means clear that futures contracts are capital assets, especially if they are entered into as hedges. As hedges, they may constitute an integral part of a company's trade or business and may not be subject to capital gain or loss.

### **Conclusions**

Apart from requiring specific legislation for the regulation of a Futures Market, there does exist in Ghana a broad framework of legislation which would only require fine tuning to make the operations of a futures market possible.

These areas, having been identified in the paper, will now require the commitment of the policy makers to turn the concept into reality.

## SUMMARY OF GROUP DISCUSSION

This session on futures markets regulation generated a lot of discussion. The main issue raised is whether it is best to set the legal framework for the futures market first before the exchange is established or otherwise. Details of the main questions and answers are shown below:

**QUESTION:** In establishing a futures exchange in the country, what do you think is the order to be followed – setting the legal framework first before regulatory details are promulgated or the reverse?

**Answer:** It is always best to set the broad legal framework before the details are provided as the market progresses. In the US, the futures market took off before detailed regulations were developed.

**Question:** Is it in the best interest of the country to form a regulatory body first before establishing a futures market? In Uganda, a regulatory body was formed well before the stock market started operation.

**Answer:** It is usually best to have a regulatory body before the futures market becomes operational. However, considering the delays by the governments in passing legislation and the country's experiences in the past relating to securities regulation and the stock exchange, it would be in our best interest to move even before a major law is passed.

**Question:** Who will make the decision regarding the legal framework or legislation?

**Answer:** Usually, the Ministry of Finance will make the necessary recommendations before it is sent to the Attorney General's office. The recommendations are then sent to parliament before they can be passed.

**Contribution:** It is rather unfortunate that our court system does not treat dispute cases of companies with top priority. The time has come for the private sector to put pressure on the judiciary system for changes. The judiciary must start training their personnel for arbitration on securities.

**Contribution:** There is indeed cause to worry about our judicial system. The judiciary does not embark on any information dissemination campaign; e.g., there are no Ghanaian law books or company code available for the public. In any case, the weakness in the judiciary system is not peculiar to any futures market, but prevails in other

areas such as the stock exchanges. Despite these constraints, business gets done; and so we should start with what we have and improve as times goes along.

## CHAPTER 6

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### INTERVENTIONIST POLICIES IN AGRICULTURAL AND FINANCIAL MARKETS

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*Dr. J. Dirk Stryker, President, AIRD Consulting*

The economic rationale behind the establishment of a futures market is that it reduces risk and therefore increases the welfare of risk averse participants. It also leads to more orderly market conditions, which increases market efficiency. It further facilitates investment decisions. Futures markets are usually subject to controls by the government. Several tools are used for such interventions which includes price controls, e.g., fixed interest rates. Another tool effectively used for price intervention is buffer stock, e.g., managed exchange rate. Trade policy, such as cocoa exports, can also be used for interventions.

#### INTERVENTIONIST POLICIES IN THE FUTURES MARKETS

Speculators should be able to predict variations in prices and be able to determine risk. They should be able to make some judgements about what the evolution of prices is going to be, otherwise they would not be buying these contracts. The problem with interventionist policies is that they tend to reduce the amount of predictable price variations. For example, looking at domestic cocoa prices, there is no variation in a single year. This tends to reduce the predictable price variations and shift the market setting from one of risk to uncertainty. There are sufficient parameters or factors that go into the decision process of creating prices. These are sufficiently vast and complex. It is very difficult to come up with any kind of probability calculations. This is the primary kind of problem we get into when we have government interference in a fairly arbitrary way. It is often difficult to predict in advance because it is a complex process and inevitably involves politics, as well as economic considerations, which are often quite difficult to predict.

Talking about how futures markets evolved in the United States, there were still some substantial government interventions. Most of these interventions were in the form of price supports, which protected farmers from serious declines in prices. Even so, there was still a substantial variation that took place without necessarily being subject to government policy. However, when there was a big harvest and prices went down below the minimum levels, then there was a cushion and the price supports came in to play. That is somewhat different from a situation in which you do not know what the price is going to be.

For instance, if you have a situation, as you appear to have in Ghana, where there is some effort to try to maintain the exchange rate, which is not depreciating as rapidly as the rate of inflation, we are not certain about how long that will be maintained because it is subject to all kinds of uncertainties. In a situation where you cannot make a nice careful risk calculation, government intervention is likely to be arbitrary, of a political nature and not likely to be laid down very carefully in legislation. This will just create some kind of uncertainty that can create substantial problems. In so far as we are trying to assess what the risks are of different price levels, we can take a look at a few factors which presumably are requirements. This is an economist's view on the issue.

## **REQUIREMENTS FOR A FUTURES MARKET**

It is often said that one of the requirements for a well functioning futures market is that there is a well functioning spot market with transparent prices and that there are no public or private monopolies. In the Ghanaian context, why then is it that there are no secondary cash markets for government securities floated by the Bank of Ghana for instance? If there is no secondary market, then it is difficult to see how a futures market will help in this sense. There must be something fundamentally wrong that we need to look at more carefully to understand what is involved.

Another requirement for the establishment for a future exchange is the provision of good infrastructure for grading, distribution, transportation, storage and communications. Although Ghana is making inroads in the establishment for these facilities, there are still some problems that need to be worked on.

Strong legal structure for enforcement of property rights and contracts, including repayment rules, must also be in place to ensure the smooth running of a futures exchange. In Ghana, if the legal system is going to support the futures exchange, then the authorities must deal with the problems of costly delays, etc.

Conditions of the following types must also exist for a futures exchange to be established: stable currency, reliable credit markets, full range of financial institutions, bankruptcy procedures, etc.

Other factors needed for a well functioning futures exchange include:

- Adequate capital resources among potential members to form a viable clearing entity
- Sufficient number of traders, speculators, and financial institution to create reasonably stable market
- Involvement of foreign firms and lack of restrictions on capital movements to allow for external diversification of risk. Ghana futures market can be linked with other exchanges, e.g., London, Chicago, etc.
- Absence of major uncertainty resulting from government intervention.

## **THE REALITIES OF ESTABLISHING FUTURES EXCHANGE IN GHANA**

Creating a futures exchange in Ghana will not be very easy, but may be useful where:

- There is no well-developed international futures market in which traders can hedge, e.g., against cedi depreciation.
- Transaction costs are such that price fluctuations in Ghana may differ substantially from those on the world market. Some of the reasons for these price differences are as follows:
  - Product is both exported and imported, e.g., cotton, palm oil.
  - Product differs in quality from world market, e.g. maize.

- Absence of strong secondary market for government securities and uncertainty associated with exchange rate create risk premium relative to foreign interest rates.

Where prices in Ghana differ from those at the world market, the market will be very thin. e.g., cola nut – there is no futures market for this product. Also, given the low volume of trade relative to production and consumption in Ghana, the markets are likely to be thin.

The high proportion of the foreign exchange market that passes through Bank of Ghana makes this market highly susceptible to government intervention.

In conclusion, it is imperative that futures market in Ghana is established only where the risk of government intervention is absolutely minimal.

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## INTERVENTIONIST POLICIES IN AGRICULTURE

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*Dr. S. K. Dapaah, Chief Director, Ministry of Food & Agriculture*

My presentation is on the real issues affecting Ghana which makes it vulnerable to government interventions. As the basis for the understanding of these issues, I will present some statistics of some agricultural and macro-economic parameters of Ghana. Refer to Figures and Tables at the end of the presentation for statistical details.

- Ghana constitutes 0.2% of the world's population.
- Has 0.02% of the world's GDP
- GDP per capita in Ghana was about \$500 in 1970 and fell to the lowest value of \$325 in 1983. As a result of the economic recovery program, the level of per capita income has been consistently rising though it took a sharp dip in 1995.
- The agricultural sector has 5 sub-sectors:
  - Foodcrops
  - Cocoa
  - Forestry
  - Livestock
  - Fisheries

The relative distribution of the sub-sectors are as follows: Foodcrops (63%), Cocoa (16%), Forestry (11%), Livestock (5%) and Fisheries (5%).
- The forest reserve in Ghana was about 30% of the total forest area in the 60's. Now it is down to 11%.
- The Northern region alone constitutes one-third of the total land area.
- The Ashanti region is the only region where females own a relatively greater part of the land (about 54%). On the other hand, in the north, we have only 2% of the land owned by women.
- Age distribution – between 30 – 49 years constitute about 47% and below 30 years is about 33%.

We needed all this information to be able to know what government interventions are all about and why we have such interventions. Ghana's target is to become a middle-income country by the year 2020 – Vision 2020. Given the structure of the economy and the fact that agriculture contributes about 40% of the total GDP, the main issue here is what it will take for the agricultural sector to achieve this middle income status. Statistical analysis shows that it will take an average GDP growth rate of about 8% in order to achieve this objective. This implies that agriculture should have a growth rate of about 6% for the next 20 years.

Empirical evidence indicates that in a developing country like Ghana, the overall GDP growth rate is usually between 0 and 2% above the agricultural growth rate. The important point here is that it will take enormous effort on our part to achieve a growth rate of 6%.

## GROWTH

Presently agricultural growth rate is 2.5%. This was after a slump in the 70's and early 80's (1970 – 1982) where the growth rate was negative at 1.2% p.a. There has been considerable growth in the crop sub-sector. For example, between 1980 and 1981, cassava, which is the largest crop produced in the country, increased to 32% of the agricultural GDP. This means that it is not only cocoa which contributes significantly to the GDP.

## SUGGESTIONS FOR COMMODITIES TO BE TRADED ON THE EXCHANGE

Potential commodities that can be considered for the futures market are as follows:

- Maize
- Cotton – it's trade on the exchange is questionable as at now.
- Palm Oil
- Cola Nuts

## AGRICULTURAL PROBLEMS IN THE COUNTRY

Ghana is not doing badly in agricultural production. Looking at the West Africa market's trade in agriculture, an average of 18% of total import is on food. Nigeria imports 24% of food and Ghana imports 9%, which is the lowest in the West Africa sub-region.

Part of the problem the country is facing in the agricultural sector is not due to interventionist policies, but it is the under-development or inefficiencies of certain commercial activities that are carried out.

In Figure 3, there are two demand functions – the demand facing the farmer and that facing the retailer. The present situation is that if the quantity produced is  $Q^1$  then the consumer pays  $P_r$ . If quantity shrinks to  $Q$ , then consumer pays  $P$ . Between  $P_r$  and  $P$  is the market margin which is presumed to be captured by the market women. This large margin explains one of our main problems in agriculture in Ghana, which is the fluctuations in the prices of farm produce.

If, however, there is a 5% improvement in the marketing or productivity (improvement may come from input level, farm level, wholesale, retail or processing), what we have then is another demand function facing the farmer called  $D_r^1$ . This is the win-win situation. The farmer can increase production from  $q$  to  $q^1$  at a relatively higher price and the consumer is then able to consume more at a lower unit price.

From this illustration, we can see that if efficiency (depending on where it is coming from, e.g., marketing of produce) is increased (about 10 times), we can have a shift in supply or demand resulting in an increase in productivity.

There are a host of issues, such as the technology, marketing of produce, linkages of policies, prices, etc. which come together to result in the situation described above. This complex situation therefore forces the government to intervene. In our economy, the distribution of agricultural produce is the most binding constraint and we therefore welcome the

government intervention in this area to help ease the situation.

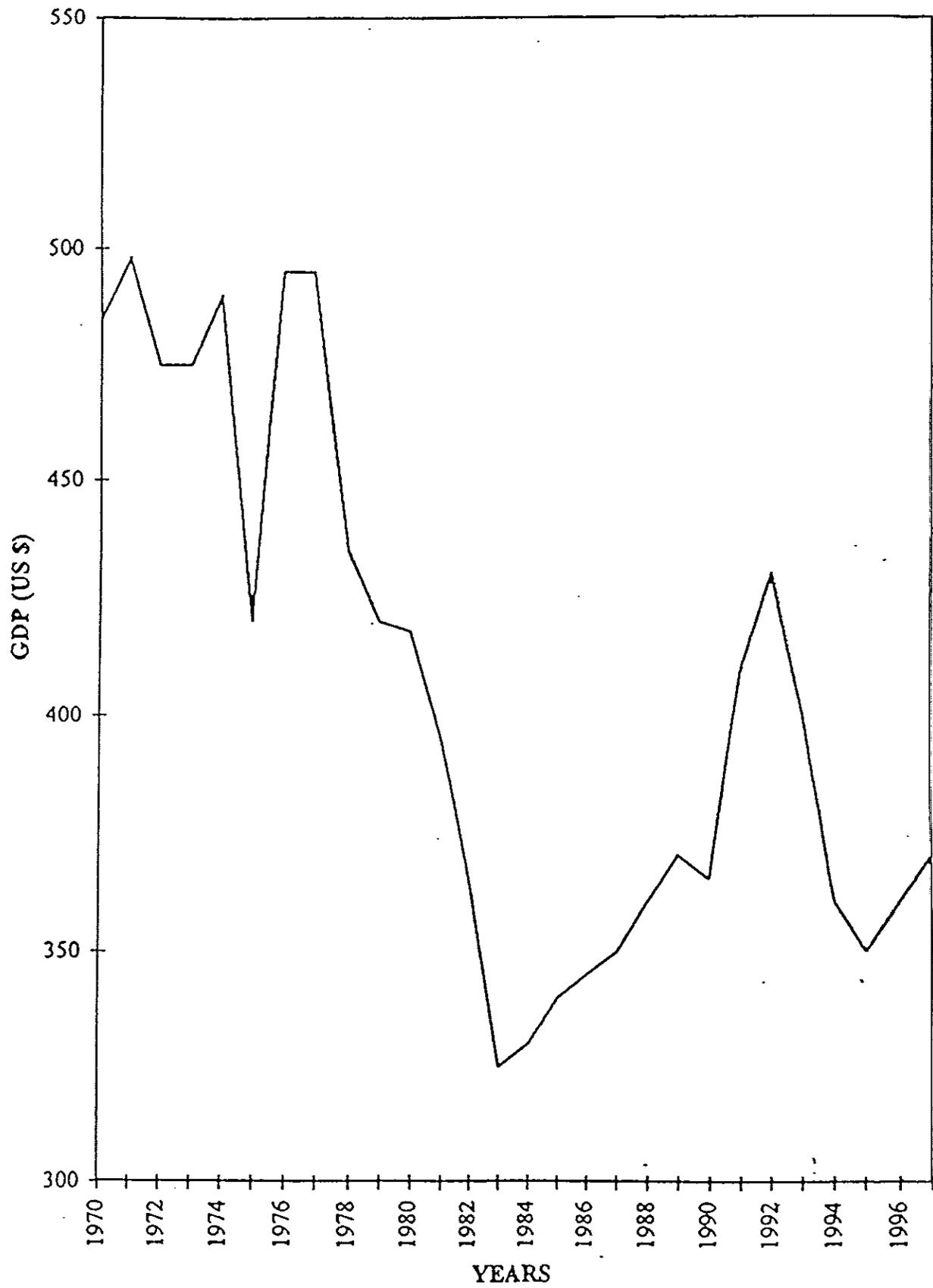
#### **IMPORTANT CONSIDERATION IN SETTING UP FUTURES MARKET**

There is a considerable variation in the year-to-year prices of agricultural produce, which is not necessarily due to government interventions. Factors such as the following contribute to the wide swings in prices:

- poor technology
- poor marketing of produce
- lack of information awareness
- lack of good distribution channels

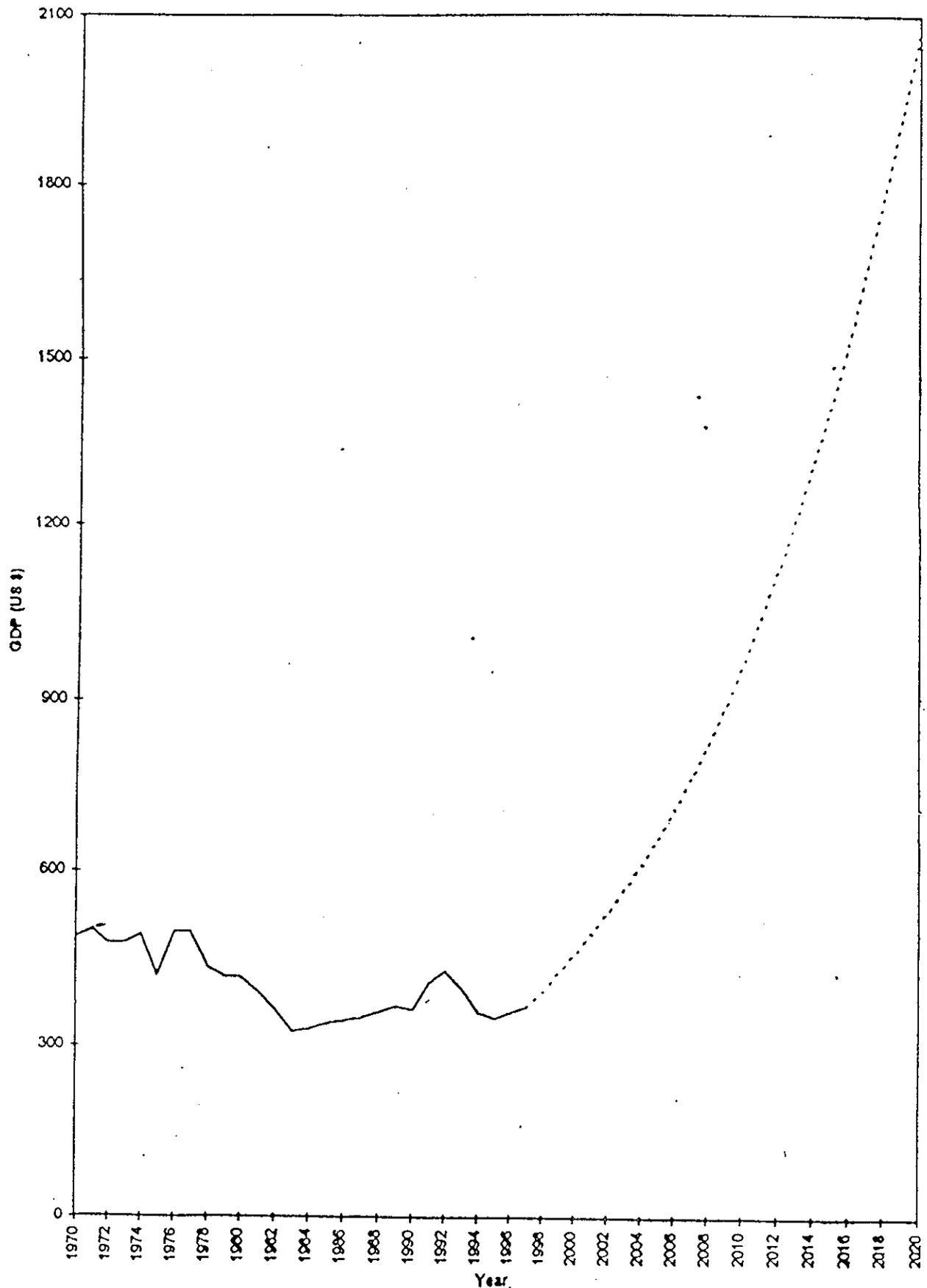
In setting up a futures market therefore, these problems resulting in huge price fluctuations must be addressed. Government intervention in this area is therefore welcomed to ensure price stability. In the US for example, 89% of the agricultural sector budget for 1996 went into subsidies for the farmers and other transfers. This has helped stabilize prices of farmer's produce.

In conclusion therefore, there are some positive aspects of government interventions in certain sectors of the economy that could ensure the smooth running of futures market. However, frequent interventionist policies would not be helpful to the establishment of futures markets.



SOURCE: MOFA (1997)

Figure Trends In GDP Per Capita In Ghana (1970 - 1996), and Projection under Vision 2020 (1997 - 2020)



SOURCE: MOFA (1997)

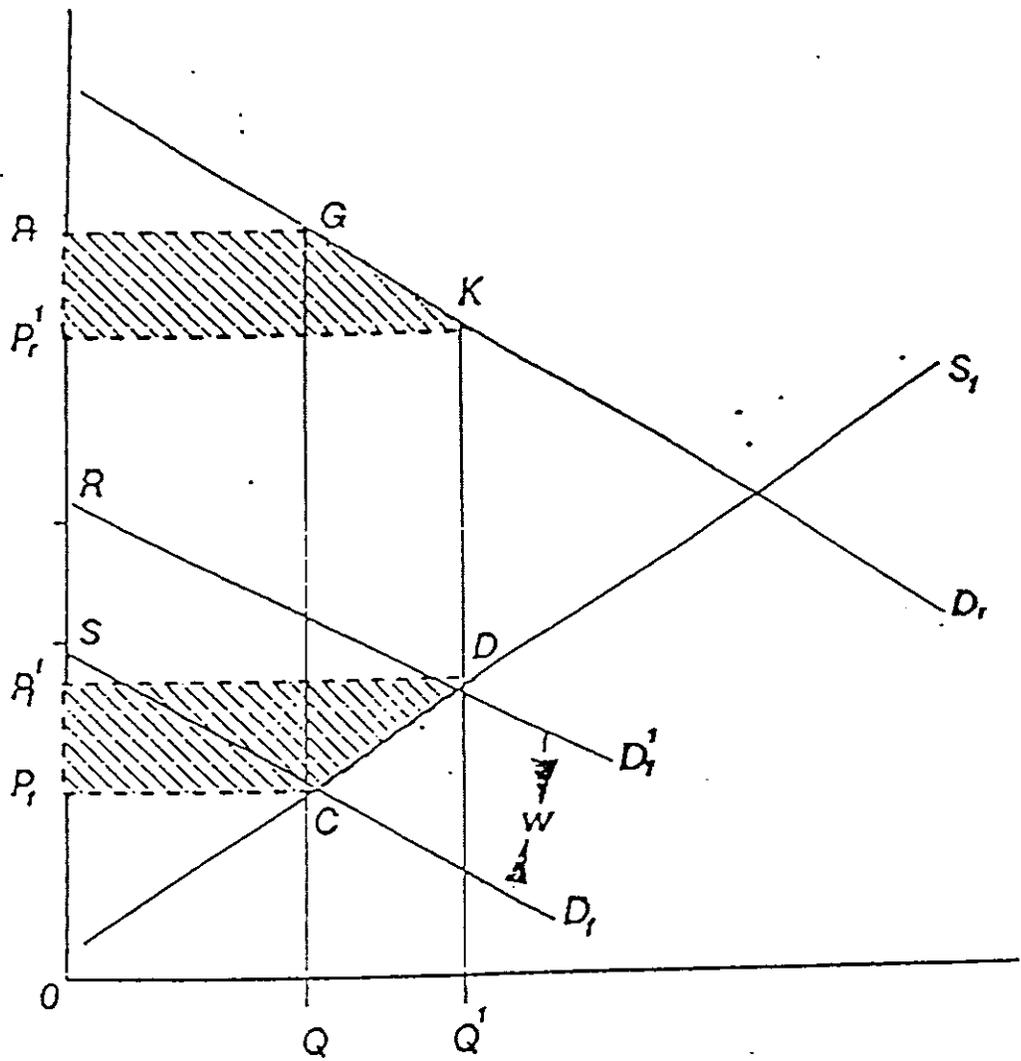


Fig. Simplified Model showing distribution of gains.

Table 1

## GHANA: SUMMARY ECONOMIC INDICATORS

	Actuals					
	1991	1992	1993	1994	1995	1996
<b>NATIONAL ACCOUNTS AND PRICES</b>						
National accounts (as % GDP at current market prices)						
Gross domestic product	100.0	100.0	100.0	100.0	100.0	100.0
Agriculture	45.5	44.8	44.1	44.8	45.0	44.4
Industry	17.0	17.4	17.1	17.0	16.8	16.6
Services	37.5	37.8	38.7	38.2	38.2	38.9
(real growth rates, annual % change)						
Gross Domestic Product	5.3	3.9	5.0	3.8	4.5	5.2
of which Agriculture	5.8	-1.2	2.3	-2.7	4.2	4.0
(as % GDP at current market prices)						
Gross Domestic Investment	15.9	12.8	14.8	16.9	18.6	18.7
of which Private Investment	7.6	2.5	3.1	2.9	3.9	4.1
National Savings	8.9	3.6	0.4	8.1	12.1	10.3
Inflation *CPI % change)						
Period Average	18.0	10.1	25.0	24.9	59.5	45.6
End-of-Period	10.3	13.3	27.7	34.2	70.8	32.7

Table 2

Table QUALITATIVE ASSESSMENT of the Current State of Agricultural Development Effort in Ghana.

FACTOR	Meat Proc.	Roots/Tubers	Cocoa	Fruits Veg.	Fish-eries	Live-stock	Food Proc.	Feed Proc.	Oil palm	By Prod	Cereals /Leg.	Dis-tribu	Poverty Alleviation
<b>QUALITATIVE ASSESSMENT (scale 1 - Most enabling ... 5 - Most limiting)</b>													
<u>Technology:</u>													
-Improved Production Technology	4	3	1	3	5	4	4	3	2	2	2	4	3
-Agro-Processing Opportunities	3	4	4	5	4	3	3	3	3	4	2	4	4
-Transportation Facilities/Cost	5	4	3	5	4	4	3	3	3	4	3	4	4
-Incentive Prices	4	4	3	4	4	4	4	3	3	4	4	3	4
<u>Marketing &amp; Standards:</u>													
-Ext. Marketing Opportunities	5	5	1	4	3	4	3	3	3	4	4	4	4
-Quality Standards	4	5	1	4	3	5	4	3	3	3	3	4	3
-Grading Standards	5	5	1	5	4	5	4	4	4	4	4	4	4
-Packaging Standards	5	5	1	5	5	4	5	5	4	4	4	4	4
-Market Information Availability	4	3	1	3	4	5	4	4	4	4	3	4	4
-Private Sector Involvement	4	1	1	1	2	1	1	2	2	4	1	2	2
-Private Sector Facilities	4	2	5	4	2	2	2	2	4	4	2	4	3
-Government Support Facilities	4	5	1	5	4	4	5	4	2	5	4	4	4
-Marketing Skills (National)	5	3	2	4	4	4	4	4	4	4	2	4	4
-Benefit/Cost Ratio Ranking	4	2	4	3	5	3	2	2	3	1	4	3	3
<u>Linkages:</u>													
-Forward and Backward Linkages	5	3	5	3	3	2	1	1	4	1	4	4	3
-Level of Risk (Production)	3	4	3	4	5	4	2	2	3	3	3	3	3
-Level of Risk (Marketing)	4	5	1	5	5	3	4	4	3	2	3	3	3
-Off Season Produc. Opportunities	5	4	4	2	4	3	3	3	3	4	3	4	3
-External Market Opportunities	5	4	1	3	2	5	2	3	4	3	3	4	3
<u>Price Policy:</u>													
-Real Price trends	2	4	3	4	4	3	3	3	3	4	4	3	3
-Policy consistency	4	4	3	4	4	3	4	4	3	4	3	4	4
-Level of implicit/Explicit Taxation	2	1	4	2	2	3	2	2	2	4	2	4	2
-General Perception	4	4	2	3	4	4	3	3	3	2	3	4	3
-Export Promotion Opportunities	4	3	1	2	2	4	2	3	3	3	3	4	3
-Current Research Funding	4	5	1	4	5	3	4	4	2	5	1	5	4
-Ideal Research Funding	3	1	2	2	2	2	2	2	3	1	3	1	2
<b>OVERALL BENEFIT/COST RANKING according to most binding constraint (1 - 12)</b>													
	7	3	12	8	10	6	5	2	9	4	11	1	

Source: S. K. Dapaah, (1995).

AREA OF SSA RELATIVE TO THE REST OF THE WORLD			
1.	World	133,342,000 sq km	(100%)
2.	SS Africa	23,006,000 " "	(17.25%)
3.	China	9,561,000	(7.17%)
4.	USA	9,373,000	(7.03%)
5.	Australia	7,687,000	(5.76%)
6.	India	3,288,000	(2.46%)
7.	Europe	2,171,000	(1.62%)
8.	New Zealand	269,000	(0.20%)
9.	Ghana	239,000	(0.18%)

DISTRIBUTION OF GLOBAL GDP (1990)			
1.	World GDP (1990)	\$22,298,850 million	Population (Millions) 5,284 (100%)
2.	USA (23.86%)	5,320,200 million	250 (4.73%)
3.	Japan (13.20%)	2,942,890 "	124 (2.35%)
4.	UK (4.37%)	975,150 "	57 (1.08%)
5.	China (1.63%)	364,900 "	1,134 (21.46%)
6.	Belgium (0.86%)	192,300 "	10 (0.19%)
7.	SSA (0.73%)	162,940 "	495 (9.37%)
8.	New Zealand (0.19%)	42,760 "	3 (0.066%)
9.	Ghana (0.028%)	6,270 "	15 (0.28%)
10.	Other (55.12%)	12,295,440 "	3,196 (60.48%)

## COMPARISON OF KEY PARAMETERS

	U.S.A	GHANA	HIGH INCOME COUNTRIES	WORLD
Subsidies and other current Transfers as % of total expenditure (1996)	59%	10% (1985)	59%	
Military Expenditure as % of GDP	3.8%	1.4% (1995)		2.8%
Institutional Investor Credit Rating	92.6	31.4		35.8%
Merchandise Exports (1996)	\$575,477 million	\$1,684 million		(\$5,398,224) million
Merchandise Imports (1996)	\$814,858 million	\$3219 million		\$5,555,200 million
Per Capita ODA		1991 (\$58) 1996 (\$36)		
Net Private Capital Flow		\$5 m (1980) \$477m (1996)		

Source: World Development Report, 1998.

## GDP COMPARISON

	<u>\$ MILLION</u>	<u>\$ MILLION</u>	% OF WORLD GDP (1995)
	1980	1995	
WORLD	10,768,090	27,846,241	100%
GHANA	4,445	6,315	0.02%
SSA	292,557	296,748	1.1%
BELGIUM	118,022	269,081	1.0%
USA	2,708,150	6,952,020	25%
REST OF THE WORLD		20,322,077	73%

Source: World Development Report, 1997

Table 6

Leading exporters and importers in world trade in commercial services, 1995  
(million dollars and percentage)

Rank	EXPORTERS	Value	Share	Change	Rank	IMPORTERS	Value	Share	Change
1	United States	189.5	16.2	8	1	Germany	130.3	10.7	20
2	France	96.0	8.2	8	2	United States	128.3	10.5	7
3	Germany	79.5	6.8	25	3	Japan	121.6	10.0	15
4	United Kingdom	69.4	5.9	13	4	France	76.9	6.3	11
5	Italy	64.7	5.5	17	5	Italy	62.9	5.2	17
6	Japan	63.9	5.4	13	6	United Kingdom	57.8	4.7	10
7	Netherlands	47.2	4.0	12	7	Netherlands	45.3	3.7	11
8	Spain	39.6	3.4	17	8	Belgium-Luxembourg	33.7	2.8	-
9	Hong Kong	36.1	3.1	16	9	Canada	29.3	2.4	4
10	Belgium-Luxembourg	35.3	3.0	-	10	Korea, Rep. of	27.5	2.3	36
11	Austria	31.5	2.7	-	11	China	24.6	2.0	57
12	Singapore	29.3	2.5	26	12	Chinese Taipei	23.8	2.0	13
13	Switzerland	26.1	2.2	14	13	Austria	23.1	1.9	-
14	Korea, Rep. of	25.1	2.1	33	14	Spain	21.6	1.8	17
15	Canada	21.2	1.8	10	15	Hong Kong	21.2	1.7	17
16	China	18.4	1.6	14	16	Russian Fed	20.2	1.7	31
17	Chinese Taipei	15.6	1.3	15	17	Thailand	16.6	1.5	22
18	Sweden	15.2	1.3	13	18	Australia	17.2	1.4	12
19	Australia	15.1	1.3	13	19	Sweden	17.1	1.4	17
20	Thailand	14.7	1.2	28	20	Singapore	16.5	1.4	23
21	Turkey	14.5	1.2	35	21	Norway	15.9	1.3	-
22	Denmark	14.3	1.2	4	22	Switzerland	15.4	1.3	21
23	Norway	14.2	1.2	-	23	Denmark	14.0	1.1	17
24	Russian Fed.	11.6	1.0	30	24	Indonesia	13.2	1.1	18
25	Greece	9.5	0.8	4	25	Brazil	13.2	1.1	34
26	Philippines	9.3	0.8	38	26	Malaysia	10.6	0.9	21
27	Mexico	8.8	0.7	1	27	Ireland	10.5	0.9	27
28	Poland	8.6	0.7	92	28	Finland	9.7	0.8	39
29	Egypt	8.3	0.7	7	29	Mexico	9.3	0.8	27
30	Portugal	8.1	0.7	21	30	Israel	9.2	0.8	14
	Total of above		88.8	14		Total of above	1039.0	85.2	15
	World		100.0	14		World	1220.0	100.0	14

a. Not comparable to previous years due to change in methodology

b. Estimate

THE STRUCTURE OF THE AGRICULTURAL  
SECTOR IN GHANA

AGRIC. GDP (1996) : \$2.9 BILLION

1.	FOOD CROPS*	63%
2.	COCOA	14%
3.	FORESTRY	11%
4.	LIVESTOCK	7%
5.	FISHERIES	5%

SOURCE: MOFA

\* In 1987 Constant Prices

## LEVEL OF POTENTIAL BUSINESS

GDP = \$6.3 billion (1997)

AGRIC GDP = \$2.5 Billion

### COMMODITIES SUITABLE FOR INVENTORY CREDIT

- MAIZE
- COTTON
- MILLET
- SORGHUM
- PALM OIL
- DRIED & SMOKED FISH
- COWPEAS
- GROUNDNUTS
- SOYABEANS
- CASSAVE (CHIPS, STARCH)
- YAMS
- RICE

### CONTRIBUTION OF SUITABLE COMMODITIES TO

TOTAL AGRIC GDP	=	40%
AVERAGE % MARKETED	=	20%
POTENTIAL VALUE	=	\$200 million
CEDI EQUIVALENT	=	¢500 billion

prb: 9/6/99

Table 9

## Alternate Macro-economic Growth Scenario

ITEM	1996	2006	2020
Population: Annual Growth Rate	17.7 million	23.3 million (2.8%)	31.6 million 2.2% (2007-20)
<b>Scenario 1:</b>			
Vision 2020 Objective with High agricultural growth of 6% p.a. GDP			
GDP Growth Rate	\$6.5 billion	\$13.4 billion	\$39.4 billion
GDP Per Capita	5.2%	7.5% (1997-06)	8% (2007-20)
Agricultural GDP	\$370	\$586	\$1,290
Agric. Growth Rate	\$2.5 billion	\$4.3 billion	\$9.2
Agric. Share of GDP	4.0%	6.0% (1997-06)	6.0% (2007-20)
Industrial GDP	39%	32%	23%
Industrial Growth Rate	\$0.9 billion	\$2.5 billion	\$9.5 billion
Industrial Share of GDP	4.2%	11% (1997-06)	10% (2007-20)
Service GDP	14%	19%	25%
Service Growth Rate	\$3.1 billion	\$6.6 billion	\$20.7 billion
Service Share of GDP	6.3%	8% (1997-06)	8.5% (2007-200)
	47%	49%	52%
<b>Scenario 2:</b>			
Vision 2020 objective with Medium Agricultural Growth of 4% p.a. GDP			
GDP Growth Rate	\$6.5 billion	\$13.4 billion	\$39.4 billion
GDP Per Capita	5.2%	7.5% (1997-06)	8% (2007-20)
Agricultural GDP	\$370	\$586	\$1,290
Agric. Growth Rate	\$2.5 billion	\$3.8 billion	\$6.5 billion
Agric. Share of GDP	4.0%	4% (1997-06)	4% (2007-20)
Industrial GDP	39%	28%	16%
Industrial Growth Rate	\$0.9 billion	\$3.0 billion	\$12.2
Industrial Share of GDP	4.2%	13% (1997-06)	11% (2007-20)
Service GDP	14%	22%	31%
Service Growth Rate	\$3.1 billion	\$6.6 billion	\$20.7 billion
Service Share of GDP		8% (1997-06)	8.5% billion
	47%	49%	52%

Table 10

GHANA: GROSS DOMESTIC PRODUCT (SECTIONAL GROWTH RATES)

ITEM	CONSTANT 1973 PRICES											
	1986	1987	1988	1989	1990	1991	1992 <sup>**</sup>	1993 <sup>**</sup>	1994 <sup>**</sup>	1995 <sup>**</sup>	1996A <sup>**</sup>	1996B <sup>**</sup>
1. AGRICULTURE	3.3	0.0	3.6	4.2	(2.0)	1.7	(0.6)	2.8	1.0	4.5	3.6	3.5
1.1 Agriculture (Crops) & Livestock	0.2	(0.3)	6.0	5.1	(4.1)	6.8	(1.9)	3.0	0.0	6.5	4.2	4.2
1.2 Cocoa Production and Marketing	18.2	3.3	(6.3)	3.2	3.0	(2.0)	2.1	3.5	1.0	2.3	2.5	2.1
1.3 Forestry and Logging	1.2	1.5	3.4	1.2	3.6	2.1	3.3	1.2	1.8	2.0	2.0	1.8
1.4 Fishing	14.0	(10.1)	2.3	0.6	2.4	1.4	2.0	2.4	1.2	1.6	1.8	1.6
2. INDUSTRY	7.6	11.5	7.3	2.6	6.9	3.7	5.8	4.3	2.8	3.3	3.3	3.0
3. SERVICES	6.5	9.4	7.8	6.7	7.9	6.8	7.7	7.0	6.6	7.5	7.1	6.9
Plus Import Duties	22.2	0.5	6.0	6.0	12.3	1.8	4.3	3.8	3.3	3.1	3.3	3.1

Source: Statistical Service

# Feature Story: 1996 Farm Bill

The Federal Agricultural Improvement and Reform (FAIR) Act of 1996 was signed into Law by President Clinton on April 4, 1996. Trade provisions of the Farm Bill reorient U.S. trade and food aid programs towards market development, with increased emphasis on high-value and value-added products. Annual Export Enhancement Program (EEP) expenditures are capped under the new Farm Bill. Additionally, total EEP funding during fiscal years 1996 through 2000 is set at more than \$1.6 billion less than the maximum levels permitted under the Uruguay Round Agreement. The Market Promotion Program is renamed the Market Access Program and funding is capped at \$90 million for fiscal years 1996-2000. The Farm Bill also authorizes P.L. 480 Title I agreements with private entities in addition to foreign governments, and broadens the range of commodities available for P.L. 480 programming. The legislation provides protection for farmers against unilateral export embargoes, and places new emphasis on high-value products in the GSM Export Credit Guarantee Program. Changes in agricultural trade programs under the 1996 Farm Bill are summarized below:

## Export Credit Guarantee Programs

These programs guarantee repayment of credit extended to foreign importers to purchase U.S. farm products. The Export Credit Guarantee Program (GSM-102) covers private credit extended for up to 3 years. The Intermediate Export Credit Guarantee Program (GSM-103) covers private credit extended for more than 3 years to 7 years.

--Authorizes a new short-term supplier credit guarantee program.

--Includes more flexible criteria for determining countries' creditworthiness for GSM-103 intermediate-term credit guarantees.

--Mandates annual program levels for GSM-102 and GSM-103 at \$5.5 billion through 2002, but allows flexibility in how much is available for each program.

--Allows credit guarantees for high-value products with at least 90 percent U.S. content (by weight). It requires that a minimum amount of credit guarantees be available for processed and high-value products (25% in 1996 and 1997, 30% in 1998 and 1999, and 35% thereafter), unless this reduces total commodity sales under the program.

## Market Promotion Program (MPP)

MPP is designed to develop, maintain, and expand markets for U.S. agricultural products by partially reimbursing participants' costs of conducting approved export promotion activities in foreign countries. Participating organizations include nonprofit agricultural trade organizations, regional trade groups, and private companies.

--Renames MPP the Market Access Program (MAP) and funds MAP at \$90 million annually for fiscal years 1996 through 2002.

--Prohibits direct MAP assistance for brand promotions to foreign companies for foreign-produced products, or to companies that are not recognized as small business concerns under the Small Business Act, except for cooperatives and non-profit trade associations.

## Export Enhancement Program

This is an export subsidy program which is used to help U.S. exporters compete against subsidized prices in specific export markets.

--Limits funding authority for this program to \$350 million for fiscal year 1996; \$250 million for fiscal year 1997; \$500 million for fiscal year 1998; \$550 million for fiscal year 1999; \$579 million for fiscal year 2000; and \$478 million each for fiscal years 2001 and 2002.

--Allows the Secretary of Agriculture to make available, consistent with Uruguay Round commitments, up to \$100 million annually for the sale of intermediate-value products, in order to reach U.S. export volumes recorded during the 1986 to 1990 period.

## Dairy Export Incentive Program

--Directs the Secretary of Agriculture to continue the dairy export subsidy program to develop world markets, at the maximum volume and funding levels consistent with Uruguay Round limitations.

## Dairy Export Trading Companies

--Directs the Secretary to provide necessary advice and

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## INTERVENTIONIST POLICIES OF THE BANK OF GHANA IN THE AGRICULTURAL AND FINANCIAL MARKETS

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*Dr. D.O. Andah, Director, NBF Dept., Bank of Ghana*

### INTRODUCTION

Bank of Ghana (BOG) has primary responsibility for the conduct of monetary policy. The Bank exercises this responsibility in consultation with the Ministry of Finance.

Monetary policy specifically entails regulating the level of money supply to achieve desired economic objectives, which include a low level of inflation, rapid economic growth, maximum employment and balance of payments (BOP) equilibrium.

To achieve the ultimate objectives, monetary policy utilises various instruments to regulate the money supply. The major instruments of monetary policy are direct credit controls, Open Market Operations (OMO), the Bank Rate, reserve requirements and moral persuasion.

BOG's interventions in agriculture have been in the form of commodity bill financing schemes, mainly for grain purchases, and promotion of subsidiary agricultural companies.

This paper reviews BOG's interventions in the agricultural sector in section 2, implementation of monetary policy during the period before the Economic Recovery Programme (ERP) is discussed in section 3, and developments afterwards in section 4. Conclusions to the paper are given in the final section.

### BANK OF GHANA'S INVOLVEMENT IN THE AGRICULTURAL SECTOR

Over the years, BOG initiated a number of policies intended to arrest adverse situations in the agricultural sector of the economy. These are discussed in this section.

#### Cocoa Bill Financing Schemes

The idea of a bill financing scheme for the purchase of cocoa dated as far back as 1958 when rapid increases in the volume of the crop made it difficult for the Cocoa Marketing Board (CMB – now COCOBOD) to finance purchases from its own resources. The COCOBOD held a very substantial part of its resources in very liquid assets. The COCOBOD was also borrowing from the London market for crop purchases.

During the 1960/61 cocoa season, all the bill financing was done entirely by the banking system in Ghana. However, the borrowing was based on interest rate differentials in London and Accra money markets. The COCOBOD shifted all its borrowing from London to Accra money markets when interest rates were lower in Accra than in London money markets in the early 1960's.

Initially, the COCOBOD effected its bill financing by drawing 90-day bills of exchange on its subsidiary marketing company in London – The Cocoa Marketing Company (CMC). The CMC discounted the bills with the Ghana Commercial Bank (GCB), with the BOG providing rediscounting facilities up to an arranged limit.

In 1963, COCOBOD financed the crop with 90-day Inland Issuance Bills drawn on CMC. These were endorsed and accepted by the commercial banks. Rediscount facilities were available at the BOG. The banking system then pre-financed the purchase of cocoa by the acceptance of the discounted bills, which were paid by COCOBOD on maturity after receipt of proceeds of sales of cocoa abroad.

However, during the period of having an over-valued foreign exchange rate, falling world market prices and falling production levels from the mid 1970's to the early 1980s, the COCOBOD was unable to liquidate its indebtedness to the banking system through bill discounting for purchase of cocoa.

All the same, COCOBOD in the 1980's continued to finance purchases of the main crop through bill discount pre-financing. Before the opening of the new main crop season, COCOBOD would forward to the BOG Inland Issuance Bills to be discounted for the purchase of the season's cocoa crop. The crop is insured with the State Insurance Company and hypothecated to the BOG. On the basis of this, the BOG would accept the discounted value of the bills and farm some out to the banks.

Since the 1993/94 main crop season, COCOBOD has been using an off shore receivables-backed trade finance facility for cocoa purchases. COCOBOD attributed the shift to the emergence of high interest rates in the domestic financial markets.

### **Grains Bill Financing Scheme**

The BOG introduced the Grains Bills Financing Scheme (GBFS) in the mid-70s when the success of the then Government's "Operation Feed Yourself" agricultural programme left the country with high post-harvest losses, particularly in rice and maize. There was no well-organised financing package by any of the banks to purchase farmers' produce at harvest time. Farmers were consequently left at the mercy of traders who bought farm produce at low prices, creating a disincentive for farming in subsequent seasons. The scheme was designed to achieve three main objectives:

- to make funds available for the purchase of farmers' grains, thus ensuring a ready market for their produce at all times;
- to stabilise the market price of the grains to serve as an incentive for continued production; and
- to support the purchase of grains for a national food security stock for relief supplies in times of emergency or extreme scarcity.

The first bill finance scheme was introduced in 1974 to finance the purchase of maize, rice, groundnuts, copra, pineapples, oranges, etc. Bills amounting to ₵92 million were drawn by 14 marketing companies over a period of 5 years (1974-78). The scheme became dormant between 1978-84. However, the food crises in Ghana after the 1983 drought and bush fires gave an impetus to maize farming. In 1984, the national output of maize rose to 524,000 metric tonnes from the 1983 level of 172,000 metric tonnes. The dramatic turn around revived the question of an effective marketing strategy for food crops.

The Grains Bill Financing Scheme was therefore reintroduced in 1984 in the form of a consortium financing scheme. The consortium mobilized an amount of ₵2.4 billion over 4 years (1984-88) for the Ghana Food Distribution Corporation (GFDC) for maize purchases. Two other financing schemes were launched in the 1988/89 and 1990/91 seasons to finance maize purchases.

The schemes created a ready market for farmers' produce in the rice growing areas in the north, the maize belt in Ashanti and Brong Ahafo regions and the coconut growing areas in the West.

In spite of these achievements, the scheme recorded losses for BOG. The losses were attributed to the inability of the marketing companies in the 1974 scheme and GFDC in subsequent schemes to retire all bills floated on due dates. GFDC attributed their inability to retire maturing bills to the following factors:

- imposition of the guaranteed minimum price on them by the Government;
- lack of adequate warehousing facilities; and
- government's failure to pay for the buffer stock as the terms of the scheme had stipulated.

### **Grains Warehousing Company**

BOG set up the Grains Warehousing Company (GWC) in 1975 as a direct effort in its attempt to achieve the objectives of the GBFS detailed in the previous section. The company purchased and stored grains, which it sold in the lean season. GWC also failed due to inappropriate policies adopted by the company's management.

### **Other Bank of Ghana Agricultural Projects**

#### **a. Shai Hills Cattle Ranch**

The ranch was established in 1973 near Afiencya on the Accra plains. It was set up to demonstrate the viability of commercial beef cattle ranching in Southern Ghana plains and train personnel in commercial livestock ventures.

**b. Agricultural Development Company (ADC)**

ADC was set up to produce cotton on a large scale under irrigation to feed the emerging textile manufacturing industries in Ghana. It was registered to grow and market other farm produce and livestock.

**c. Wulugu Livestock Company**

The company was established in 1979 to run a ranch for cattle and sheep in the Northern Region on a scientific basis to serve as a model for local ranchers.

**d. JOFA Project**

The BOG financed the Jukwu, Okumanin, Fosu Akwamstem (JOFA) project through the Agricultural Development Bank (ADB) to develop 300 hectares of plantations in these locations in the central and eastern regions. The project was undertaken by the former State Farms Corporation.

From the BOG's view, the amount of ₵25.9 million allocated for the JOFA project was:

- to promote the development of oil palm estates in a bid to offer employment avenues and encourage the development of an out-grower scheme;
- to encourage the development of oil palm based cottage industries; and
- to link oil palm production to industry through the establishment of small oil extraction mills whose production will be sold to established industries such as Unilever, Crystal Oil Mills, etc.

With the exception of the JOFA project, which was partially successful, the other 3 projects did not achieve their set objectives due to inappropriate policies adopted by their management.

**MANAGEMENT OF MONETARY POLICY DURING THE PRE-REFORM PERIOD**

For the best part of our economic history, the BOG operated largely a direct control system of monetary management. This entailed the reliance on predominantly direct intervention instruments. These included direct credit control, reserve requirements and regulation of interest rates.

**Direct Credit Controls**

This involves the imposition of ceilings - both global and sectoral on lending of each bank. The BOG identified the higher priority sectors of the economy for

preferential credit allocation purposes. Although the priority versus non-priority categorisation was changed from time to time, sectors like agriculture, exports and manufacturing were almost invariably accorded top priority, while the trading sector, among others, was accorded relatively low priority.

### **Reserve Requirements**

Reserve requirements were also resorted to more or less as a quasi-direct instrument of intervention. Under this measure, banks were required to keep portions of their deposits liabilities in certain forms specified by BOG. These mandatory reserves included cash, securities and commodity bills. The high reserve requirements, especially unremunerated cash reserves, resulted in a high cost of mobilised funds to the banks. In fact, it was not uncommon for banks to refuse to take deposits from the public because they had limited avenues for investing mobilised funds profitably.

### **Interest Rates**

All interest rates were administratively determined. To keep the cost of financial intermediation low, and especially the interest cost to the budget, interest rates were generally set low. Thus, deposit rates, in particular, remained substantially negative in real terms, discouraging savings. There is no gainsaying that the artificially low lending rates encouraged inefficient use of scarce resources.

The controls had their own attractions, the most obvious one being the ease of implementation. All that the BOG had to do was to determine money supply growth for the year based on economic growth and inflation objectives, determine the credit growth that would be consistent with money supply growth, distribute this credit among the banks based on certain criteria, and sit back to monitor compliance of the banks to the guidelines.

Thus at the beginning of each year, the BOG sent out general policy guidelines, as well as bank specific ones. The general guidelines included interest rate regulations and distribution of credit by economic sectors. The specific guidelines stipulated ceilings for the total credit allowed each bank. Penalties were imposed by the Banking Supervision Department on non-conforming banks.

However, the use of direct controls generally proved ineffective and counter-productive. It contributed to the deterioration in the banking system, by making financial intermediation unattractive and discouraging innovation in the system leading to misallocation of resources. These weaknesses inevitably necessitated reforms in the conduct of monetary policy.

### **Monetary Policy Reform**

The Government and the BOG adopted a gradualist approach to monetary policy reform in 1986. Before then, the market for government securities was virtually non-existent, since the government relied primarily on central bank

borrowing to finance its deficits. The first step was, therefore, to create a market in securities that would be used for monetary policy purposes. A weekly auction in treasury bills was started in 1986, followed in 1988 by the introduction of BOG bills. The need for BOG bills arose for two reasons.

First, by 1986 government had put its house in order, and in fact had started accumulating modest surpluses on the narrow budget (i.e., the budget that excludes capital expenditures financed directly by foreign loans and grants). Government, therefore, did not need any financing from domestic sources. Secondly, the Structural Adjustment Facility (SAF) and Enhanced Structural Adjustment Facility (ESAF) programme during this period aimed at moving government away from borrowing from the banking sector, hence limits were set for such lending. BOG bills were, therefore, introduced mainly to provide an avenue of investment for banks.

The Bank of Ghana introduced further improvements in the money market between 1987 and 1992. In 1989, longer dated instruments of BOG bills (3 and 5 years bonds) were introduced to sterilise a significant portion of the excess liquidity, in preparation for a full-fledged system of indirect monetary management. 30-day BOG bills were introduced in 1990 to allow BOG to deal more efficiently with the short end of the market.

In order to improve activity in the inter-bank market, BOG introduced the concept of discount houses, the first (Consolidated Discount House) of which started operations in 1987. The discount houses (currently 3 in number) were expected to facilitate the transmission of monetary policy measures from the Central Bank to the banks. The discount houses, therefore, acted as media through which surplus banks could be lent to deficit banks, with the Central Bank dealing mainly with the discount houses in the event of an overall market surplus or deficit. This arrangement worked fairly well, and reduced significantly direct interaction between the banks and the BOG.

By 1991, the restructuring and stabilisation efforts began to produce results; and by early 1992, the remaining direct controls were abolished. Banks became free to set their own interest rates, and formulate their own credit policies. Bank of Ghana has since relied on Open Market-type Operations (OMO) to control money supply and inflation. These are discussed in detail below.

### **Open Market-type Operation**

In implementing monetary policy, the BOG intervenes mainly through the primary auction of treasury bills and BOG bills, a process also referred to as open market-type operations. The system has gone through several transformations.

Originally, weekly auctions of treasury bills and BOG bills were held on Fridays, with the amount offered based on the difference between projected and target reserve money, maturing bills, as well as Government's borrowing requirements. The weekly auctions were initially open to both the banks and the non-bank public. Although the latter had to submit their bids through their bankers.

In March 1996, BOG introduced the wholesale auction system. Tenders became restricted to only primary dealers, comprising commercial banks, discount houses and four brokerage firms. A well functioning primary dealer system should help develop the secondary market. The primary dealers should be able to underwrite the whole issue at the tender. They should also be leaders in the market and able to act as market makers in government and BOG securities.

## **MONEY MARKET RATES**

While a lot has been achieved in laying down the infrastructure for market intervention, there has not been much success in achieving money supply and inflation targets over the years. However, the money supply target was achieved in 1998, and we are on course to achieve the inflation target for 1999. Again, the main problem has been the continued presence of Government influence on the market.

The Ghanaian experience has revealed that market participants respond only to the Central Bank's actions, which come either through movements in the Bank Rate or the results of preceding auctions. Thus, even if all other indicators (inflation, growth, etc.) point to a change in rates, the market participants appear to wait for signals from the BOG before reacting themselves. One possible explanation of such inertia on the part of the market participants is the long history of controls (especially over interest rates), which has rendered them dependent on the Central Bank to provide leadership in market trends.

The BOG has recognised this and is taking steps to remove this inertia. The Bank Rate is now being actively used in signalling its policy stance, rather than allowing the rate to remain stable for long periods while underlying macro-economic conditions change.

The money market performance could, however, be enhanced with a decline in government borrowing requirements and the intensification of the use of secondary instruments instead of primary issues for monetary intervention.

## **Discount Window Operations/Refinance Schemes**

Discount window operations and refinance schemes are used by central banks to offer collateralised short-term lending to banks. With the discount window, the term of the loan corresponds to the whole residual maturity of the collateral. Refinance schemes, on the other hand, are more flexible and allow the central bank to offer maturities of shorter duration than the collateral.

Refinance schemes are mainly used by industrial countries with efficient money markets to influence key interest rates, and this signals the central bank's monetary policy stance to the market. Refinance schemes are effective as monetary policy tools only in well functioning money markets where interest rates adjust quickly to reflect market conditions.

In Ghana, the money market is still underdeveloped, and interest rates are sticky in an environment with excess liquidity. Nevertheless, the BOG has used the discount

window in its money market operations. The scheme is largely operated as a means of meeting occasional shortages in the market, rather than for monetary intervention purposes. In most cases, the window is operated at the request of the deficit bank. The introduction of the discount houses and lately the step up of activities of the interbank market has significantly reduced the use of the window.

### **Foreign Exchange Operations**

Foreign exchange operations are often used by central banks for monetary policy purposes, either in the form of outright sales/purchases or swaps.<sup>1</sup> The BOG has used both forms on limited scales.

Ordinarily, the BOG's exchange rate is based on reserve targeting. However, on a few occasions when reserves were higher than targeted, the BOG has used outright foreign exchange sales as a tool of monetary policy.

A foreign exchange swap may be used by a financial institution as a risk management tool to control its asset/liability structure. Central Banks, in addition, use foreign exchange swaps to influence domestic liquidity, manage foreign exchange reserves, and stimulate domestic financial markets. When a central bank buys foreign exchange in a swap with domestic currency, it injects liquidity into the market. This is because the commercial bank's accounts are credited with the domestic currency equivalent of the foreign currency they give to the BOG. The opposite happens when there is a reverse swap.

Foreign exchange swaps were introduced in Ghana in 1997, mainly in response to problems faced by some commercial banks when reserve requirements were introduced on foreign currency deposits. Because banks were required to hold reserves (both cash and liquid/assets) in domestic currency, they would be exposed if there should be significant depreciation of the domestic currency. The Central Bank thus introduced swaps to enable banks to cover themselves. Since most banks had problems only with the liquidity asset requirement (LAR), foreign exchange swaps were designed such that the commercial banks were issued with Treasury bills at market value in exchange for the foreign exchange. This liquidity impact of the swap transaction was thus neutral.

Central banks may become exposed to foreign exchange risks if they lose the cover for the swaps (i.e., if the proceeds from swaps are used for foreign exchange transactions). They may, however, be employed on a limited scale to fine-tune monetary policy, especially in a country such as Ghana, where the secondary market is shallow.

### **Conclusion**

Some progress has been made in adapting the environment and framework to improve the conduct and effectiveness of monetary policy. There, however, remain major

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<sup>1</sup> A foreign exchange swap is a financial transaction between two parties who exchange amounts of two different currencies with an agreement to pay back these amounts at an agreed interest rate at an agreed date in the future.

challenges to monetary management. The size of the financial system remains small relative to the size of the economy. This implies low competition and attendant inefficiencies in the provision of financial services.

Ghana's system of monetary management is still evolving, though, given the continuing structural changes occurring in the financial system, it is necessary to continue to examine the indicators of financial conditions, including various monetary and credit aggregates, the exchange rate and inflation. There is the need to develop the secondary market, as well as private sector instruments.

The recent liberalisation of the financial sector of Ghana and the introduction of free markets for interest rates and foreign exchange have created a conducive environment for the introduction of financial futures contracts. While borrowers worry about increases in interest rates, depositors and holders of Treasury Bills worry about falling interest rates. A futures contract on interest rates could benefit both borrowers and depositors.

## SUMMARY OF GROUP DISCUSSION ON INTERVENTIONISTS POLICIES

Most of the questions raised were directed towards the agricultural sector and the Bank of Ghana speakers, and were about some of the measures that are being taken or should be put in place to correct the bottlenecks in the agricultural sector and also in the central bank. Some of the salient questions and the corresponding answers on the floor are as follows:

**Question:** What are some of the measures being taken by the Ministry of Food and Agriculture to achieve an agricultural GDP average growth rate of 6% for the realization of the Vision 2020 project?

**Answer:** The Ministry of Food and Agriculture is doing the following:

- gradually removing unfavorable policies to enhance productivity.
- working together with the Feeder Roads to construct roads to ease the flow of agricultural products.

**Question:** What is going on with agriculture as far as information dissemination is concerned?

**Answer:** The Ministry has tried in the past to inform public by circulating a newsletter with information on crop production, weekly prices, etc. However, this could not be sustained due to financial constraints. Right now, the Ministry is establishing a website, which will contain information on climatic conditions, crop production forecasts, weekly prices, etc.

**Question:** In the past, the Government came out with the minimum guaranteed price because of falling prices of agriculture produce. Is the Government still doing this?

**Answer:** The minimum guaranteed prices died a natural death several years ago. In recent years, the Government has not intervened in falling prices of agricultural products.

**Contribution:** Price stability is very crucial if the country envisages establishing a futures market. Stabilizing prices will help the farmers to invest more in technology and therefore increase productivity.

**Contribution:** It is very important that attention is given to risk more than to fluctuating prices in agricultural products. By reducing risk, investment is increased. Other means of reducing risk are insurance and hedging.

**Contribution:** Sometimes the actions of the Bank of Ghana are very unproductive; and if the country is going to run an efficient futures market, then the central bank must ensure that such

interventions are rare. For example, some time back, when interest rates started falling, investors locked in on longer term T-bills, which have higher rates. The Bank of Ghana reacted by withdrawing the longer term T-bills, making available only the 90-day T-bill. An action of this nature does not create the conducive environment for investors.

## CHAPTER 7

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### THE PRACTICALITIES OF ESTABLISHING A FUTURES EXCHANGE

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*Mr. David Rennie, Former General Manager/Commercial Union Investment Management (South Africa) Ltd.*

The basic function of the futures market is to create infrastructure for its members – the facility of systems, rules, trading process, etc. They have to provide the dispute framework not only to sort out the squabbles or issues raised among members, but also to make it applicable to end-users and the clients of the market. This dispute framework should be clearly spelt out in order to attract foreign participants into the market. Another function of an exchange is to collect and disseminate information relating to the market and the products. The establishment of the clearing house eliminates counterparty risk through the margin system.

#### THE EXCHANGE

In considering the establishment of an exchange, numerous issues, such as the number of members, capital requirements, seats, rules, availability fund, trade mechanism, product specification, etc., have to be addressed.

#### Membership Structure

When we look at the membership structure, we have clearing members, broking and non-broking members. One of the first steps to be taken is that the futures market should decide on the constituent of its members. In the US, membership is confined to individuals. These individuals are members of the exchange and they work for companies who come to the exchange. In South Africa, our members are all institutions. Membership is once again broken down into clearing members and brokers.

#### Capital Requirement

Before being admitted as member, members are required to satisfy the capital requirement. One of the issues therefore is how much capital will be required of members and their willingness to tie up such capital. The exchange membership is done through the seat system. The seats are offered to members of the public or institutions who participate in the exchange. In the South Africa futures market, the seats were initially offered at \$5,000 each and now they are \$50,000. The other question is whether the seats are offered only to the citizens of a country or if foreigners are included. I think that if Ghana is going to be the gateway to Africa, then I think we need foreign participation in our market right from the beginning. Two things happen in bringing in foreign participation. These foreign investors bring in foreign capital and expertise.

## **Seats**

The number of seats is defined by the number of people who would be prepared to raise up the initial capital into the exchange. In South Africa, we started off with 65 members and we initially did not have commodity futures. In 1995, the exchange sold another 84 seats to agricultural members with an initial capital of \$1,000,000. From 1995 to date, agriculture products have constituted about 25% of the turnover of the exchange.

## **Rules**

Another important issue to be addressed in setting up an exchange is the rules that will govern the operations of an exchange. The rules really set out the management and the controls needed to be put in place. Members of an exchange belonging to the executive committee appoint a CEO. It is also good to appoint an ex-officio member from the regulators into the exchange. In SAFEX, the regulator's ex-officio member is there only in a supervisory role. In every exchange we have a compliance officer. This is the man in charge when things go wrong.

## **Fidelity Fund**

Another critical factor to be addressed is the fidelity fund. What we are doing with the fidelity fund is that we are building up reserves. The fees that go to the clearing house or the exchange are used in two ways. Firstly, they are used to finance the infrastructure and the day-to-day running of the exchange. Secondly, part of the fees goes to the fidelity fund. Currently in South Africa, with the success of the market, the fund is now used as an education fund. The idea is to bring communities or members of other countries to South Africa for education using the fidelity fund. The management of the fidelity fund has to be in place to ensure that the fund is safe. This fidelity fund is the lender of last resort when problems arise within the exchange.

## **Other Issues**

In a self-regulatory market where officials and traders are registered, the key issue that arises is the education of the participants. The contents of the education must be well structured, so that participants are well informed of the rules of the game. Other issues, such as the trading rules (e.g., the times the market is going to trade), arbitration dispute procedures and the legal framework for the exchange, also need to be covered in the education programme.

## **TRADE MECHANICS**

We have two types of futures trade:

- Floor trade
- Electronic Trade

There are advantages and disadvantages of these two systems of trading. The major advantage of the floor trade is that it is relatively cheaper. However, it has serious limitations. Items of trade tend to be limited. The most important drawback is that is

usually localized (say the market is in only Accra) and does not encourage foreign participation.

In the electronic market, there are billions of dollars of capital floating around in the market around the world, which can be put to good use and shifted around at a relatively low cost. In South Africa, we now have the electronic or screen trading system. It costs millions of dollars to set up an electronic market. Ultimately, every exchange will be automated. In Ghana, we have to be very careful in choosing the system of trade. We can pick up efficiency by picking up some other vehicle. It will cost us millions of dollars, but it might be worth it. The main advantages of electronic trading are that it allows international participation and also increases liquidity.

### **Products of the Exchange**

A working committee will have to be established to have a thorough look at the products to be offered at the exchange. This review will encompass issues such as product specification, increasing the efficiency of the product delivery process and reducing the cost of trading. The cost of trading is actually an incentive to use the futures market. This is because futures markets reduce the cost of trading.

### **Dissemination of Information**

There is no way we can establish a futures market without price transparency. This issue is a prerequisite for the existence of a futures market. In Ghana, at least we have some level of price transparency. Prices have to be determined by the markets but not by external participants. Daily marked to market price is very important in the way the whole market works. It has to be achieved and not manipulated. Product information is also another issue of significance because all the market participants have to understand the products they are buying.

### **THE CLEARING HOUSE**

The setting up of a clearing house is a very critical step towards the establishment of a futures market. This is because the existence of a clearing house guarantees performance of buyers and sellers of futures contracts, which means that market participants do not have to worry about the performance of payments and delivery obligations of the counter-party to the futures contracts. Some of the critical issues which must be attended to in the establishment of a clearing house are: the contractual relationship that must exist between the clearing house and the exchange, the selection of the management committee, the systems at the clearing house, risk management and fees.

The basic question of the form the clearing house is going to take and the kind of members to be allowed is an important issue to be addressed when establishing a futures market. The first thing we need to do is to define the sort of relationship that is to exist between the clearing house and the exchange. There must be a contractual relationship between the exchange and the clearing house and also between members of the clearing house.

The systems to be used at the clearing house must be carefully chosen. The systems must be able to perform the following functions: recording trade, deal matching, margin calls, accounting information and deal confirmation notes.

The clearing house also acts as a counterparty to every trade and also as a cross guarantor. This function of the clearing house ensures that counterparty risk is eliminated. Other risk management functions that the clearing house performs are: setting exposure and position limits and also margin levels.

### **Conclusion**

Without education and regulation, it is impossible to have a well functioning futures market. The education of market participants is an on-going process which starts well before the exchange is established. The regulatory framework must also be put in place and must be relevant to a particular market's needs.

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## THE PRACTICALITIES OF ESTABLISHING A FUTURES EXCHANGE - EDUCATION AND EXAMINATIONS

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*Ms. Brenda J. Greyling, Former Managing Director/The South Africa Financial Instruments Association (SAFLA)*

One of the primary objectives of education on the futures markets is to make all market participants know that the market is safe. In South Africa, at the very onset of establishing the futures market we did not make this very clear, and would have wished to have corrected this. The American exchanges have done all the work for us over the past decades so that we, as an emerging market, can go on and take a smooth walk with respect to education.

Futures trading involve risks related to fluctuating prices. There is no guarantee about the loss or insolvency of a broker, but the mechanism is outlined to ensure the financial integrity of the exchange and also to minimize customer losses.

### **Safety Measures**

There are several measures to ensure the safety of the market. The first is the way cash is settled on a daily basis. Prices may move up or down and the market value of an open position increases or decreases resulting in either gain or loss for the day. This is credited or charged to each customer's account, and they have to wait to find out if they have to deposit money or not.

Another safety measure is the margin requirement. The margin requirement is the first line of defense against defaulters. The buyers and sellers of futures are required at all times to ensure that they deposit sufficient funds in brokerage accounts to cover losses and these deposits provide protection to the exchange. An important feature of the futures market is that it ensures that purchase is properly matched by a corresponding sale. The clearing house has become the buyer to every seller and a seller to every buyer. This is the mechanism to ensure payment or daily collection. The clearing house demands a performance bond which is a fixed deposit (3 million rands now in South Africa). This is the initial margin when a contract is open.

Clearing members must not only provide the original margin, they must also maintain sizable guarantees deposits. These capital requirements are pooled and are available if they are needed to meet the obligations of the brokers. Another safety measure that ensures the integrity of the market is that the capital funds and the margin deposits are used only for the purpose for which they were set aside for. They cannot be used for any other purpose. If a customer of a brokerage becomes unable to fulfill his/her obligation, then the clearing members must use their own funds to make up for the customer's deficit. There is also a limit on the position a trader may have in a day. All these help ensure the safety of the market.

Futures brokers must have and maintain capital to meet their obligations with the public they do business with. They are therefore subject to continuous audit and stringent rules and regulations.

The exchange also imposes position limits on the clearing members corresponding to the amount of guarantee provided by the clearing members. These members, in turn, impose similar limits on their broking and non-broking members. The broking members must satisfy the exchange that they are of good character and sound financial standing. They must comply with the standards about education and experience that is prescribed by the exchange. They must satisfy the exchange that they have adequate back office support and the compliance officer has the obligation to make sure that these are in place.

The non-broking members may trade only on their own accounts and are required to clear all trades through a clearing house member.

There is provision for the transfer of market positions. For example, a company in a bad financial position may jeopardize the safety of customers' funds. They can be carefully directed to pass all of their positions to a broker that is solvent and the client would therefore not be at a disadvantage.

As far as public protection is concerned, brokers must ensure that clients sign disclosure documents reminding them of their rights and obligations and that they have the appropriate funds. The public is also protected by the rules regarding their solicitation of business and the abandoning of unsolicited cause. In this regard, members are required to go through proficiency tests and also in cases where they have been unfairly dealt with by the exchange, they can go to the business management committee.

## **EDUCATION AND EXAMINATIONS**

Concerning education and examinations, the South Africa experience can be used as a yardstick to explain the essence of education. In South Africa, the first thing that was done in the education of stakeholders is to establish a philosophy. This was followed by the technical training, which was done in three phases over a three-year period.

### **The philosophy**

In the case of South Africa and also the American exchange, a non-profit organization was established solely to oversee the education of stakeholders. This association was made up of members who were going to use the futures markets, e.g., institutions, financiers, brokers, etc. The cost per quarter for an individual taking the examination was \$500. After two years, the association has become self-funded; and besides providing education, it has set up an information and research laboratory.

The scope of the education is another issue that must be clearly outlined. The courses offered should be such that they are not beyond what was needed. In South Africa, the US market was used for the initial training; and after a while, the training became localized. The education materials used were also made by the association. A book was published, which serves as an introduction to the futures market, and this was sold to members. The education materials must be made as user friendly as possible.

Another issue of concern is whether the examinations must be recognized internationally or not. In South Africa, we have a partnership with the United Kingdom institute. This partnership does not confer any benefits apart from enhancing status.

### **Technical Education – Phases 1, 2 and 3**

The education of stakeholders of futures markets must start very early. In South Africa, the first phase of education campaign started two years before the futures market was established. It was initially targeted at regulators and policy makers. Other stakeholders, such as legal experts, tax people, etc. people from institutions and banks who would not necessarily be the traders, but would be making decisions, were also targeted in our education campaign. A basic course in futures, which seeks to bring the basic understanding of the futures markets and its mechanisms, was offered to all these participants. The next area of focus of our education campaign was directed at traders and the portfolio managers who need to know the basics, such as risk management, asset allocation and the futures market trading. The public and the speculators were also recipients our initial education campaign.

About a year before the establishment of the futures market, the second phase of our education campaign started with the focus being the traders, compliance officers, trustees and back office personnel.

The third phase of the education campaign is on-going and it seeks to update market participants on current issues, such as risk management, competition, agriculture futures, etc., and others seeking specialized knowledge in certain area of the market. Workshops and conferences such as an annual industry conference and broking workshop, are organized as part of the on-going education campaign.

### **EXAMINATIONS**

The functions of the examining board or association are outlined as follows:

- Set syllabus/exam questions
- Administer exams
- Grant certification
- Maintain register
- Settle disputes
- Inform market/seminars
- Write and approve computer systems
- Supply study material

Three types of certificates are usually awarded for the examinations – junior, ordinary and senior certificates. A senior dealer is needed to supervise a holder of a junior certificate. An ordinary certificate holder can run his own account and that of clients. A senior certificate holder is regarded as fellow of the institute of financial markets.

In South Africa, the syllabus outline for these examinations includes regulation, capital markets, equity markets, fixed interest markets and futures and options. These are run in

modules. The examinations are all computer-based with random questions and automatic marking. The pass mark is 70% and the exams are offered in many languages and there are also opportunities for rewriting. The examining board offers an examination guide for applicants.

The members of the exchange must appoint a compliance officer with the responsibility of training and examining of market participants. Another function of the compliance officer is to monitor dealings and back office activities.

## **CODE OF ETHICS**

One of the aims of educating stakeholders about the futures market is to help them understand the code of ethics. There are four aspects we need to look at regarding the code of ethics – integrity, skill/care/due diligence, information and promotional material. Brokers must understand integrity issues, such as overcharging, churning and insider trading. They must maintain a high standard of care in their prompt and timely executions of orders from customers and the way they advise their clients.

Dissemination of information is also an integral part of the code of ethics to be maintained by brokers. For example, risk disclosure, explanation of rights, costs, statements and forecasts, and complete and truthful accounting are all part of the information package that customers need to make decisions. The brokers must provide these. Another aspect of the code of ethics concerns promotional materials. Materials enhancing the promotion of the futures markets must be encouraged.

## Summary of Group Discussion

Issues discussed in this session pertain mainly to how capital controls affect the futures market and the concrete steps that need to be taken for the establishment of the futures exchange. The main questions asked on the floor and their corresponding answers are summarized below:

**Question:** How do capital restrictions affect futures market development?

**Answer:** One of the effects that capital controls have is that they give foreigners unfair advantage and at the same time impede Ghanaians' ability to move back and forth between foreign and local currencies. Initially, capital restrictions will certainly create problems, but I think what could be done in Ghana is to use the South Africa model involving Asset Swaps, whereby the financial institutions using the financial markets created a facility that will enable them to use some of their capital offshore.

**Question:** How do we start the futures market? Do we wait until everything is formalized or can we start and let the formalities follow? The speaker mentioned that in South Africa they had an informal market before it was formalized. How did it work, especially from the point of view of regulation, logistics and institutions that have to be put in place?

**Answer:** From the point of view of developing the market, if you have a totally inhibiting regulator, an informal market will never be operational. Instead, there will be a series of very frustrated innovative people. The main issue here is to have enough money on the table for the right people, and the informal market will kick off. The whole question of regulation is only to ensure that we have a framework so that the market will develop. This was the situation in South Africa between 1995 and 1996. In Ghana, I think there is a lot of work to be done to start the market. The work needed includes a lot of education and discussions among market players. The bottom line is that the people must be very willing to develop the market.

## CHAPTER 8

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### WAREHOUSE RECEIPT SYSTEMS

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#### INTRODUCTION

Warehouse receipts in most industrial economies are negotiable instruments backed by the underlying commodities and form an integral part of the marketing and financial systems of these economies. The overall efficiency of markets, especially in the agribusiness sector, is greatly enhanced when producers and trading firms are able to convert inventories of agricultural commodities or intermediary or finished products into readily tradable devices. Warehouse receipts, as negotiable instruments, can therefore be traded, sold, swapped, used as a collateral to support borrowing, or accepted for delivery against a derivative instrument, such as a futures contract. It is instructive to note that the consultants for the pre-feasibility study of Ghana's Future Exchange stressed the need for a credible warehouse receipt system for the development of the exchange.

However, the use of warehouse receipts is limited in many developing countries because of lack of adequate institutional and structural arrangements, which include:

- Lack of incentives for the development of private storage industry arising mostly from government intervention in agricultural markets;
- Lack of an appropriate legal, regulatory and institutional framework to support a system of warehouse receipt operations;
- Limited familiarity of commercial firms, including banks, with warehouse receipts and its potential benefits to their businesses. The benefits of a well-functioning warehouse receipt system would include:
  - Providing farmers and traders with a means to extend the sales period of modestly perishable products well beyond the harvesting period;
  - Provide secure collateral for banks and other financial institutions by assuring holders of the existence and condition of commodity inventories "sight unseen";
  - Contribute to the creation of cash and forward markets and thereby enhance competition;
  - Provide a mechanism to reduce gradually the role of government in agricultural commodity commercialisation; and
  - Can be combined with price hedging instruments and thus reduce the risks associated with price fluctuations in the market, allowing for efficiency and greater transfer of financial resources to the production and trade of commodities<sup>1</sup>.

Warehouse receipts can facilitate improvements in standardization of quality and contract enforcement of trade financing of commodities. It is much easier to establish cash or future exchanges if they can be linked to a trusted warehousing receipt system. It is therefore imperative that Ghana seeks to institute a warehouse receipt system with a high degree of integrity and international acceptance as a means to creating efficient trading systems involving cash commodity exchanges and commodity asset-backed debt and

investment instruments and markets which can then be developed into a credible commodities futures exchange. This would involve the following elements<sup>2</sup>:

- A sound institutional and legal framework;
- Open access of depositors to warehouse, on a first come, first served basis;
- Strict oversight by either a public sector institution or a body representing broad sector interests, and involving:
  - registration and provision of standards for warehouse,
  - standard system for inspection of stocks (both quantitative and qualitative):
- Collateral management must meet requirements for:
  - capital adequacy
  - management and professional capacity
  - insurance of warehouse and stock
  - insurance or bonding against illegal actions by the warehouse operator;
- Standardised documentation; and
- Grading standards enforced by certified or government graders.

Typical uses of warehouse receipts in the United States include<sup>3</sup>:

- as collateral for standard nine-month loan programmes, backed by government guarantees issued by the US Department of Agriculture-farmers use this post-harvest inventory financing to ease cash flow constraints and to facilitate the marketing of crops;
- as inventory documentation for government-owned strategic reserve grains stored in privately-owned commercial warehouses;
- as a means of making collateral out of crops held in commercial storage for private institutional financing; and
- as delivery documents that are acceptable for trading on the futures exchange, or against letters of credit in payment for exports.

The Natural Resource Institute (NRI) of the U.K. has identified three models of collateral management entities which issue warehouse receipts<sup>4</sup>:

regulated elevator-company model: consisting of grain merchants, trading companies and/or farmer co-operatives registered with and overseen by government authorities. By law, they are required to open their warehouses to third parties; also government establishes an official grading system and a state-licensed inspection company certifies the quality and grades of grain handled. Qualification for licensing include: satisfying net worth and professional requirements, being regularly inspected, submission of periodic audited accounts, stocks must be insured, the company's performance must be underwritten either

through the purchase of bonds by each company or by requiring the entire industry to subscribe to an indemnity fund;

general warehousing model: these are mostly warehouse operators who store all kinds of goods, not just agricultural products, but are barred from trading on their own account to avoid conflict of interests. They often take control of stores of farmers or traders and issue warehouse receipts that are used to raise bank loans. They are licensed and overseen by public authorities dealing with trade or monetary matters who normally place emphasis on capital adequacy and professional requirements.

private trader model: in countries without warehousing legislation, private traders will sometimes offer services similar to those described in the licensed elevator-company model.

## STATUS OF WAREHOUSE RECEIPTS IN GHANA

### Current Status of Warehouse Receipts in the Financial System

The warehouse receipt system, as a financial instrument arrangement for supporting internal commodity trade financing, was formalised within the Ghanaian financial system after a seminar in May 1993 organised by the Natural Resource Institute (NRI) of the U.K. and the Ministry of Food and Agriculture (MOFA). Inventory credit had been in the system prior to this event at the micro-level: e.g., Technoserve's activities with farmer co-operatives. Warehouse receipts for financing import trade under inventory credit also pre-dates that event, and has become a major instrument of financing bulk imports. Currently, it is estimated that about 80% of imports of bulk commodities are financed under inventory credit through warehouse receipt. However, existing warehouse receipt, by contract and by practice, are not negotiable instruments; they mostly act as financial fidelity instruments for supply-creditors under the import scheme, and as collateral instruments for three-party, stand-alone, non-transferable, attornment pledge for bank financing of internal commodity trade.

The main issuer of warehouse receipts in Ghana is SGS (Ghana) Ltd., However, its standard contract, as is, has been designed to limit its collateral management liability to the very minimum; and in the absence of a formalised institutional and regulatory framework for the negotiability of warehouse receipts, an express provision for the non-negotiability of the documents is stated in their contracts. There is no provision for the replacement of a warehouse receipt which has been lost, defaced, damaged, destroyed or torn – it is all to the risk of the depositor. Provision is made for the settlement of disputes arising out of the contract under the Rules of Conciliation and Arbitration of the International Chamber of Commerce, with proceedings to take place in London. The governing law for the contract is the substantive laws of the Netherlands, exclusive of any rules with respect to conflict of laws<sup>5</sup>.

The collateral management agreement between the Agricultural Development Bank and the Ghana Food Distribution Corporation (GFDC), the other major collateral manager, and depositors, is also an attornment pledge; however, it does not expressly limit the transferability of the warehouse receipt, but limits its negotiability and fungibility as a collateral security. The applicable law is that of the Republic of Ghana, with Arbitration Acts, 1961 (ACT.38) or any subsisting statutory modification thereof<sup>6</sup>.

Agriculture continues to dominate Ghana's economy with about 40.4% of total GDP in 1997. However, in contrast to most grain and feed commodity trading areas of the world, including southern and eastern Africa, most Ghanaian trade channels are highly fragmented. The main trade channels consist of a myriad of informal traders, with no link to the formal financial system, but who supply the majority of off-farm needs; poultry farmers and large users, however, are mainly supplied by larger and more organised traders involved in on-farm procurement. Formal financial intermediation with the sector has declined from 14.32% of total bank credit in 1991 to 10.83% in 1997, with corresponding contribution of crops (excluding cocoa) and livestock to GDP declining from 6.80% in 1991 to 2.6% in 1997. Regression analysis involving bank credit to the agricultural sector as a ratio of total credit and the sector's contribution to GDP shows a

high degree of correlation between the factors ( $R^2 = 0.9999$ )\*. The need for intermediation is therefore very clear; however, analysis of the banks' guarantee contracts for their loan portfolios between 1970 to 1993 shows that it consists of 93.2% for agriculture-related loans, even though defaults on the loans as a ratio to sectoral guarantees was the lowest among all sectors. Obviously, there are perceived risks of the sector by the financial system; most of these risks are related to issues that a credible warehouse receipt system can eliminate in the creation of a positive environment for increased volumes of marketable commodities.

In spite of the limitations of the use of warehouse receipts in Ghana due to the inadequate institutional arrangement and regulatory framework, the instrument, as used for inventory credit purposes in Ghana, has, since its formal introduction in 1993, contributed significantly to the financial and economic system.

In 1993/94 season, when the scheme was first introduced to the formal financial system, the volume of grains purchased under inventory credit was 5,730 tonnes, with 1,055 tonnes valued at US \$ 310,000—stored under the scheme, involving three trading houses, two financial institutions and one active warehouse operator. By 1997, the Agricultural Development Bank (ADB), the prime lender to the agricultural sector, had committed about 24.4% of its total advances and 16.7% of its total operating assets to inventory credit to the value of ₵43.98 billion, covering 24,480 m/t of cotton (5% of total production) and 12,650 m/t of maize (2.5% of total marketable surplus). ADB's inventory credit portfolio using warehouse receipts has grown from ₵8.8 billion in 1994 to the current portfolio of over ₵55.25 billion. According to NRI, the volume of bank income from inventory credit using warehouse receipts by mid-1997 was in the order of US \$ 1.5 million per annum.

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- \* f-observed value is 11026 against the critical value of 19.2, t-observed value is 186.39 against t-critical value of 2.92, with alpha of 0.05, and 2 degrees of freedom.

## Prospects For Growth

The potential business for warehouse receipts under inventory credit alone, if adequate institutional and regulatory framework is put in place, would include:

- **Growth in usage of warehouse receipts for inventory credit for existing stored and collateralised commodity groups:**

- Maize:

Off-farm consumption (marketable surplus) is estimated at about 500,000 m/t per annum (but only 22,000 tonnes and about 12,000 tonnes were processed and stored, respectively, by GFDC for private traders in 1995/96). NRI estimates that with privatisation and restructuring of 11 drying/storage sites of the GFDC in the maize triangle, out of the current 23 sites, up to 55,000 tonnes and 27,500 tonnes of maize, respectively, can be dried and stored at those 11 sites annually. In 1998, ADB's portfolio for maize inventory credit was €4.95 billion (13,248 m/t), having grown from €0.30 billion (1,055 m/t) at mid-1994. Also, the trend in the growth of exports of maize to neighboring countries, 8,607m/t in 1997 and 35,972 m/t in 1998, indicates strong potential for the usage of warehouse receipts in financing maize exports. The need for warehouse receipts as delivery instruments for maize exports is illustrated by the experience of the Grain Marketing Association of Ghana. Even with a confirmed letter of credit, sourcing financing quickly becomes a problem, and there is the problem of uniform grades from many atomistic suppliers. Then, once word gets round to the farmers that the order is for export, unreasonable farm-gate prices are demanded making the transaction unprofitable. With warehouse receipts, the trader purchases the equivalent grade and quantity of endorsed receipts against a bill of exchange at a negotiated price, allowing the shipper to take delivery of the commodity.

- Cotton:

ADB's inventory credit portfolio for cotton was €8.31 billion, €39.72 billion and €49.98 billion in 1996/97, 1997/98 and 1998/99 seasons, respectively; ADB'S financing portfolio could be extended through securitisation of their inventory credit warehouse receipt holdings.

- **New potential commodity groups:**

- Frozen Fish:

ADB financed €3.6 billion (43,785 m/t), €4.17 billion (31,460m/t) and €4.85 billion (73,988m/t) of imported frozen fish in 1996, 1997 and 1998, respectively, under inventory credit without using warehouse receipts; with Ghana's accreditation under the EU fisheries health standards certification, there is a vast potential for export financing of frozen fish using receipts;

- Rubber:

at least 10,000 m/t of natural rubber processed in Ghana is a potential product for receipt usage, both for local and export trade financing;

▪ **Exports of agricultural commodities subject to third-party storage:**

There are opportunities of developing usage of warehouse receipts for the financing of the following export commodities:

<u>Commodity</u>	<u>Export Volume ('000 M.T.)</u>	
	<u>1997</u>	<u>1998</u>
Coffee	3,143.89	6,810.51
Sheanuts	32,018.10	32,782.30
Cashew Nuts	3,571.61	6,810.51

▪ **Financing of the Licensed Cocoa Buyer's (LCBs) purchases:**

The greatest potential for the usage of warehouse receipts appears to be for the financing of the purchases of the LCBs. With the Cocoa Sector Development Strategy now published, the LCBs are authorised as from the crop year 2000/01, to export up to 30% of their purchases. This will put the LCBs in direct competition with Cocoa Marketing Company (CMC), one of the key subsidiaries of the Cocobod, which has in the past been arranging off-shore financing for onward lending to the CMC and the LCBs for purchases of cocoa. The diversification of financing, using local sourcing, especially, with the stabilisation of inflationary pressures and currency depreciation and the associated downward trend in interest rates, this alternative will become an important consideration by the LCBs. Warehouse receipts can play a significant role in such financing strategies. Under the Cocoa Sector Development Strategy, cocoa production is projected to reach 500,000 m/t by year 2004/5 and 700,000 m/t by the year 2009/10.

**REGULATORY/LEGAL FRAMEWORK**

According to a NRI study report, an analysis of Ghanaian law concluded that there is no existing law which accords the status of negotiable documents that are regarded as negotiable documents of title to warehouse receipts<sup>6</sup>. By contrast, other documents that are regarded as negotiable documents in Ghana, e.g., promissory notes and bills of exchange, have had that status spelled out in legislation. The need for some legislative intervention is therefore necessary for the eventual goal of a system of freely tradable warehouse receipts under the proposed futures exchange.

However, for the purpose of using the warehouse receipts as security documents for financial collateral and/or for derivative asset-backed financial dealings, including bank

issues to fund their commodity lending portfolios, PNDCL 328, the Financial Institutions (Non-Banking) Law and PNDCL 333, the Securities Industry Law, and other existing enactments provide an avenue for institutional and regulatory framework to be put in place by the Non-Bank Financial Institutions Division of the Bank of Ghana and the Securities Regulatory Commission (SRC), the respective implementation agencies for the said laws. Express negotiability can be accorded to the instruments registered and operated by licensed security dealers or investment advisors under rules the SRC is authorised by law to institute. We are proposing below a structural mechanism and regulatory framework which both the NBF and SRC could adopt for warehouse receipt operations prior to the enactment of an appropriate separate legislative instrument for the development of the futures exchanges, which law could embrace the universal treatment and dealings in warehouse receipts, including its use as a delivery document for the commodities futures exchanges.

## **2.2 Systematic Constraints**

Apart from the absence of an institutional, regulatory and legal framework for the operations of a credible warehouse receipt system, there are other systematic constraints which need to be fully addressed to allow the system to be developed efficiently. These would include the development of:

- \* improved transport, communication and logistics;
- \* free market in agricultural commodities, with minimal intervention in trade and financial flows;
- \* low transaction costs;
- \* sizeable rural storage infrastructure;
- \* credible collateral management system;
- \* efficient financial intermediation based on warehouse receipts and its derivative instruments;
- \* credible grading system of commodities under warehouse receipts;
- \* differentiated prices for quality grades;
- \* price transparency and dissemination; and
- \* fairly reliable crop forecasting and marketing information.

Most of these constraints are being tackled at various levels under the policies of the Government and by private initiative:

- \* transport, communication, etc.- massive public investment in transport development is on-going or planned under the Government's Vision 2020; and private initiatives are extending communication coverage to every corner of the country;
- \* a free market in trade of commodities- even the "family jewel", cocoa trade is on the way of full privatisation under a competitive regime;
- \* low transaction costs- competition, as envisaged by policy and market realities, is positively defining the boundaries of this issue;
- \* sizeable rural storage infrastructure- the on-going evaluation of possible divestiture of the GFDC's drying and storage capacities in the maize triangle, and the Cocoa Sector Development Strategy of either selling the public warehouses owned by the Cocoabod to the buying companies or encouraging a private companies to manage the warehouse lease then to the cocoa buying companies and other users, will definitely encourage the development of storage capacities in the rural areas to cater for demand;
- \* a credible collateral management system- SGS (Ghana) Ltd., Ghana Inspections Ltd. and other multi-nationals interested in the divestiture of the GFDC's assets, have indicated strong interest in developing the system, which with competition, will bring down the current high costs and improve efficiency;
- \* efficient financial intermediation- the Commodity Clearing House scheme to be expounded below is a proprietary initiative for the use of the warehouse receipts and derivative instruments to effectively intermediate in trade financing and re-direct resources to the commodity trade;
- \* a credible grading system- the Ghana Standards Board had, as of May 1999, put in place grading standards for milled rice and maize; grading standards for fresh kola nuts were also in place; and grading standards for palm oil were about 90% completed. For cotton, processed natural rubber, coffee, cocoa, etc. which are mostly exported, international grading standards would be applicable; for groundnuts, international standards are used, and cassava chips standards are under development;
- \* differentiated prices for quality grades- this is one of the corporate services to be provided by the Commodity Clearing House Ltd. for its registered trading houses and participating financial institutions, based on supply/demand factors and established grading standards;
- \* price transparency and dissemination- this is another of the corporate services to be provided by the Commodity Clearing House Ltd. for its registered traders and financial institutions, along with summary publication to the general public; and
- \* crop forecasting- this is a further a service planned to be provided on the major crops under its warehouse receipt portfolio by the Commodity Clearing House

Ltd., with assistance from its technical partners, LMC International Ltd. of Oxford, England.

### **THE COMMODITY CLEARING HOUSE SCHEME**

After the 1993 seminar, Aftech Consultancy Ltd. designed a proprietary scheme, known as the Commodity Clearing House (CCH) scheme, to promote the development of warehouse receipts in financing commodity trade. The project is at the final stage of licensing by the Securities Regulatory Commission.

#### **Objectives of the Project**

The project involves the setting up of a wholesale inter-bank institution, enabling the financial institutions to effectively participate in the financing of commodity trade. This is to be done by way of a financial instrument to be known as a "commodity warrant".

The warrants are asset-backed instruments secured against commodities under collateral management (securitized warehouse receipts), whose quality and quantities have been attested to by way of performance bond of first-class "Collateral Managers", initially to consist of government registered inspection companies, i.e., SGS (Gh) Ltd., Ghana Inspections Ltd., etc. or well-capitalised and technically competent warehouse operators. The warehouse receipt issued by the Collateral Managers will form the basis of market information to be provided on the commodities by the CCH and against which the warrants are to be issued. The information, to be provided on a regular basis, will include the supply and demand situation in the market for each commodity under warrant, the spot and forecast future prices, and factors of influence on the commodities' supply, demand and pricing, hence, risk and valuation factors of the commodities under the warrants. This will allow both the financial institutions and investors to determine the risks associated with the financing of commodity trade and associated securitised debt issues.

The CCH will securitize the warehouse receipts by collating data on issued receipts, creating a central registry for security dealings involving warehouse receipts, providing custodial services for warehouse receipts under warrant, creating a derivative negotiable instrument (warrants) against the receipts to be used for security dealings, and assigning security identifications to receipts presented to be used as collateral security for financing by the participating financial institutions (PFIs). The CCH will, through the nominal valuation of the face values of the warrants and the underlying receipts (which values are expected to fluctuate with variations in the related market factors), provide pricing of risks associated with the warrants; the CCH will also offer the warrants on behalf of its registered trading houses to the PFIs as debt collateral securities for funding of additional purchases, and provide a mechanism for settlement of obligations under collateral security use of warehouse receipts by its registered trading houses to the PFIs.

With availability of market information on the commodities and the warrants, as well as credit data on its registered trading houses to the PFIs, the PFIs will be able to determine what risk positions they must take in financing further purchases of the commodities

using the warrants as asset-backed collateral security, and also be able to make credit decisions against the warrants within a very short period.

To effectively entice institutional participation, the scheme is to provide liquidity to the warrants by allowing the PFIs to either trade the warrant securities or fund their loan assets by issuing short-term instruments against their holdings of warrant securities. This will enable the PFIs meet part of the Bank of Ghana's prudential requirements for the commodity asset-backed loan portfolios and also use it as a tool for attracting savings from the public. The CCH, having the requisite information on the warrants, is expected to lead-manage and underwrite these bank issues, and thus provide confidence in the market for the discount houses and brokerage firms to participate in it. For this purpose, the CCH has reached an in-principle agreement with the CDH Financial Holdings Ltd, to jointly develop, underwrite and market these products. To improve the marketability of the warrant issues, the CCH has applied to the Bank of Ghana to denominate the warrants as secondary reserve instruments, when the CCH is licensed by the SRC- this request is under consideration.

The CCH also plans to participate in purchasing for eventual resale, auctioned commodities backing warrants of non-performing loan contracts (via a fund set up initially from equity funds and subsequently to be increased with reserves), with the objective of providing confidence to the PFIs that, if for any reason, a registered borrower is unable to fulfil the terms of a warrant-secured loan contract, the warrants can be redeemed by auctioning the commodity-assets backing the warrants, which will have ready buyers, including the CCH.

The Government can also use the CCH as an avenue to finance purchases of excess supply of commodities for storage during bumper harvests for food security purposes. This can be done by the Ministry of Finance guaranteeing warrants issued on behalf of the Treasury to be funded by the public or by the financial institutions (this process is basically the same as the issue of commodity bills). The guaranteed warrants will be used to purchase the excess commodities or swapped for equivalent warehouse receipts held by traders or financial institutions, and Government can auction the underlying commodities in times of shortage.

#### **CCH'S WARRANTS AND THE DEVELOPMENT OF THE GHANA FUTURES EXCHANGE**

It is anticipated that the CCH warrant scheme will contribute tremendously to the development of the Ghana Futures Exchange, including:

- \* accelerating the development of the institutional and regulatory framework for the market operations of warehouse receipts, thus bringing credibility to the system;
- \* increasing the volume of agricultural commodities in the formal trade sector by reducing barriers to trade financing for well capitalised and managed firms involved in local and export trade of the commodities;

- \* encouraging participation of the financial institutions in the financing of the cash exchange markets of commodities and commodity asset-backed debt instruments, thus setting the stage for the smooth take-off the commodities futures exchanges;
- \* establishing linkage between market factor variables of underlying commodity assets of the warrants with the money markets, a process which will allow a smooth development of the cash market, which in turn, and in association with a financial futures market, can help in the development of a commodities futures market, by derivation; and
- \* prior to the establishment of the commodities futures exchange, the CCH scheme can help reduce the high seasonal price variability of the commodities under warrant, improve on price transparency and dissemination, establish basis determinants, and provide factor variables for price differentiation for various grades of the commodities.

## **The Synergy of a Commodities Futures Exchange to the CCH Scheme**

### **Price-Hedging Operations**

The price-hedging capacities of a commodities futures exchange will enhance the risk aversion strategies of the CCH scheme and attract even more financial resources for the development of the commodities trade. At the moment, the CCH is proposing to set up a fund from its equity proceeds to intercede in the default market of commodities backing non-performing warrant-secured loans. Under a futures market situation, a minimum value will be placed on default risks through the hedging operations. Each warrant can, either at the request of the borrower or as a condition for a loan, be combined with a put option purchased at the Exchange, that will guarantee a minimum price for the commodity under the warrant. This will enable the PFIs to provide finance at a higher percentage of the face value of the warrant and at a lower cost to the borrower. It also offers further security to the investors in commodity warrant-backed issues, thus reducing further the risks on those transactions, and attract more investors and funding for commodity trade financing portfolios.

### **Market for Underlying Collateral**

In the absence of price hedging contract, a commodity exchange can provide lenders with a ready market for the underlying collateral asset in the event of default. This also enables the PFIs to provide finance at a higher percentage of the face value of warrants and at a lower cost to the borrower, and also offers further security to the investors in commodity warrant-backed issues.

## Derivatives

The futures exchange can encourage various derivative transactions in the warrants, including its use as swap and options instrument with the financial futures market, increasing the volume of transactions, and hence market efficiency in the long run.

## **PROPOSED SYSTEMATIC APPROACH TO THE DEVELOPMENT OF WAREHOUSE RECEIPT SYSTEM**

Prior to the enactment of the appropriate legislation, either on its own or as part of the Legislative Instrument for the establishment of the Ghana Futures Exchange, it is proposed that an inter-agency institutional framework is developed to regulate the use of warehouse receipts and derived instruments that are intended to be used as financial instruments and/or as collateral securities for borrowing, for backing debt issues, and/or used as tradable securities. The interim arrangements for regulation would be covered under the existing laws comprising of PNDCL 328- the Financial Institutions (Non-Banking) Law and PNDCL 333- the Securities Industry Law, as applicable.

### **Proposed Institutional and Regulatory Framework**

The proposed institutional arrangements and regulations could cover parties that qualify to use the warehouse receipts and derived instruments as financial securities, i.e., licensed financial institutions, commercial houses using the instrument as collateral security, collateral managers issuing warehouse receipts and warehouse operators. This could include:

- \* Certified Warehouse Operators who would be required to meet storage standards set by the Ghana Standards Board and subject to regular technical audit; and also to meeting financial adequacy and reporting requirements to be set by the BOG and monitored via registered Intermediating Finance Houses;
- \* Certified Collateral Managers issuing warehouse receipts who would be subjected to uniform code of warehouse receipt contracts, and meeting standards to be set by BOG and to be regulated via registered Intermediating Finance Houses, which standards could include, among others, minimum capital adequacy, mandatory level of performance bond to be issued, or levels of contribution to an industry indemnity fund, adequacy of all-risk insurance issued on behalf of or required from depositors, and rules regarding legal obligations under the warehouse receipt system, as well as treatment of goods or interest in goods under collateral management backing warehouse receipts, including the status of commingled goods;
- \* Registered Trading Companies using warehouse receipts and derived instruments as security for financing commodity trade could be subject to capital adequacy rules, reporting requirements, registration of interest in a warehouse receipt, and

registration of all outstanding debt obligations and contingent liabilities, etc. to be set by BOG and monitored via registered Intermediating Finance Houses;

- \* Financial Institutions using or dealing in warehouse receipts as financial securities or its derived marketable securities will have to do so through subsidiary licensed brokerage firms or independent licensed brokerage firms acting on its behalf in the dealings of the securities, in conformance with the Securities Industry Law and the rules and regulations of the SRC for licensed dealers and investment advisors.
- \* Standardised Rules and Procedures for Arbitration of Disputes involving the use of warehouse receipts as financial security instruments in accordance with the provisions of the Arbitration Acts, 1961 (Act 38) or any subsisting statutory modification thereof.

### **Proposed Regulatory Framework for Licensed Financial Institutions**

The regulations for licensed financial institutions, including investment advisors and dealers, dealing in warehouse receipts and associated and/or derived instruments as financial securities in the period preceding enactment of appropriate legislative instrument for a futures exchange, could cover:

- a. registration of security interests in warehouse receipts and associated and/or derived security instruments;
- b. provisions for protection of security interests of holders of warehouse receipts and associated and/or derived security instruments;
- c. recognition of registered security interest in warehouse receipts and associated and/or derived security instruments as documents of title by registered holders;
- d. mechanisms for "transferability" and "negotiability" of registered warehouse receipts and associated and/or derived instruments;
- e. custodial arrangements for warehouse receipts used as financial security;
- f. logistic and accounting procedures for release of collateralised commodities upon borrower satisfying obligations under warrant secured loans;
- g. rules regarding prospectus, placement and settlement of warrant-backed issues to the public through licensed brokers;
- h. reporting requirements for own-account and client accounts of licensed financial institutions in their warrant-backed securities dealings;

- i. rules and procedures for auctioning commodity assets backing warrants of defaulted loans, rules for settlement and write-off of default loans, and rules for determining residual interests of parties to defaulted loans after auctioning of underlying commodity collateral, etc.;
- j. rules and procedures for arbitration of disputes arising out of contracts involving warehouse receipts as financial security instruments, as well as mechanisms for enforcement of arbitration rulings; and
- k. valuation mechanisms and accounting procedures in the treatment of the warrants as secondary reserve instruments.

## CONCLUSION AND RECOMMENDATIONS

Ghana is primarily an agricultural commodity producing economy with the sector's contribution to GDP hovering around 40% over the past decade. In spite of the considerable investment and effort put in the sector over the period, agriculture GDP has grown at an average of 2.70% p.a., crops and livestock at 3.01% p.a., and overall GDP at 4.48% p.a. between 1991 and 1996 at constant 1975 prices. Agriculture GDP growth has lagged behind the overall performance of the economy. The policy objectives of the Government to encourage investment in processing of agriculture commodities as a value-addition strategy is also constrained by the atomistic nature of the trade intervention system, low level of price transparency, undifferentiated prices at farm-gate or warehouse level providing inadequate rewards for quality, and limited linkage between the formal financial system with the trade intervention system, plus other production-related factors.

A credible warehouse receipt system could play a crucial role in improving the commodity markets and linking the commodity markets to the rapidly developing formal financial system. This should be a priority among policy makers.

Brazil's 100-year experience with warehouse receipts underlines a fundamental consideration in the design of appropriate system. There is a range of political pressures that tend to undermine the credibility of warehouse receipt systems; and given the political sensitivity of agriculture and food supplies, these pressures are particularly strong in developing countries. This must be avoided.

The institutional and regulatory framework approach proposed above, is a variant to, and could be developed into such successful systems, like the South African regulated elevator company model, where the commodity exchange, SAFEX, oversees the warehouses and the warehouse receipt system, and only accredited SAFEX warehouses can be used as delivery locations. As we lay the foundation for the development of the futures exchange, the BOG can regulate registered finance houses using warehouse receipts for financial intermediation, and the Security Regulatory Commission can and is sufficiently empowered under its statutory incorporating law to put in place the necessary ground rules and regulations for market operations of warehouse receipts and derived instruments as securities. Both the BOG and the SRC can also, either directly, or by assigning some of their regulatory logistics to accredited public or private organizations, monitor the operations of the licensed stakeholders in the use of warehouse receipts as financial security instruments, while the necessary legislative instrument for the development of the futures exchange can eventually incorporate findings of any legal shortcomings of the system under the law.

In terms of implementation strategy of a credible warehouse receipt system to support the proposed Ghana's Futures Exchange, we recommend the following approach:

- \* apply the existing Financial Institutions (Non-Banking) Law, PNDCL 328, to regulate finance houses using warehouse receipts or derived instruments for financial intermediation, and the Securities Industry Law, PNDCL 333, to

- regulate dealings of warehouse receipts and derived instruments as securities in the financial system;
- \* put in place an enabling legislation for the development of the Ghana's Futures Exchange, including the use of warehouse receipts as delivery documents; and
- \* establish the Ghana Commodities Futures Exchange after the successful establishment of Ghana Financial Futures Exchange, since financial instruments are already active in the capital markets.

The globalisation strategy of the Government dictates that we move our economic and financial systems to world standards. Enormous investment and efforts have been made in creating an enabling environment and infrastructure for the realisation of Vision 2020's objectives. Let's take one more step forward by optimising the linkage between our own and global financial resources with our agricultural commodity trade, which in turn, through backward and forward economic integration, will lead to growth in production and in investment opportunities in processing, respectively.

## ACKNOWLEDGEMENT

The publications below were the reference sources for the identified paragraphs:

- (1) Using Warehouse Receipts in Developing and Transition Economies, Richard Lacroix and Panos Varanglis, Finance & Development, September, 1996.
- (2) Commodity Exchanges and Warehouse Receipts - Can they improve the Performance of African Grain Markets? Jonathan Coulter, Principal Economist, Marketing Systems, Natural Resources Institute, U.K., November, 1998.
- (3) The Role of Warehousing in Africa - Lessons for Implementation from Four Continents, Jonathan Coulter and Nicholas Norvell, Natural Resource Institute, U.K., Nov., 1998.
- (4) Collateral Management Agreement, SGS Societe General de Surveillance SA.
- (5) Inventory Credit- An Approach to Developing Agriculture Markets, Annex 3, Specimen Collateral Management Agreement, Jonathan Coulter, NRI, and Andrew W. Shepherd, FAO Agricultural Services Bulletin 120, Rome, 1995.
- (6) Inventory Credit- An Approach to Developing Agricultural Markets, Annex 2, Legal Issues, Jonathan Coulter, NRI, and Andrew W. Shepherd, FAO, FAO Agricultural Services. Bulletin 120, Rome, 1995.

## OTHER REFERENCES

- \* Report on the Economics of Warehousing in Ghana and its Role in Agricultural Development, Jonathan Coulter, Jagdish Sondhi and Robin Boxall, ODA Crop Post-Harvest Research Programme, NRI, July 1997.
- \* Final Report on the Financing of Agricultural Trade in Ghana, Jonathan Coulter, DFID, NRI, May, 1997.
- \* Securities Industry Law, PNDCL 333, 1993.
- \* Restructuring of GFDC- Options and Implications for Food Security and Warehouse Inventory Credit in Ghana: A Discussion Brief, Grain and Feed Working Group of Ghana, Accra, 1999.

## SUMMARY OF GROUP DISCUSSION

The discussion on this session focused on the entire workshop instead of warehouse receipt systems. The main issue was that participants wanted to know the step by step approaches being adopted by the workshop organizers for the establishment of a futures exchange in the country. Some of the questions raised and the resulting answers are shown below:

**Question:** Presently, government interventions are low and the financial environment is changing. What are some of the steps to ensure that the legal structure and framework is put in place quickly so that the futures market is established?

**Answer:** Regulatory framework alone will not suffice. What we need now is a holistic approach to the establishment of the futures exchange. It is sad to say though that market participants have become frustrated as to the slowness on the part of the government (Bank of Ghana, Ministry of Finance, Attorney-General, Registrar General, etc.) in dealing with issues. What can be done is to find an effective way of educating government officials through workshops, seminars, etc. so that they can respond faster on issues. For example, the judiciary system can identify people now and expose them to the futures market so that when the market is finally established in about two year's time, they will be able to help structure the judiciary system to suit the market.

**Questions:** Are there systematic steps ahead to ensure the establishment of the futures market? Where do we go from here?

**Answer:** After the workshop, the suggestions and concerns raised will help structure the terms of reference for a comprehensive study of the establishment of the futures market in the country. Already, a pre-feasibility work has been done and the report outlined steps by step approaches to the establishment of the futures market. The next stage of the agenda is the comprehensive feasibility study which should be started very soon – in the second half of the year.

## CHAPTER 9

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### SUMMARY OF CLOSING REMARKS

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*Mr. CLIFFORD MPARE Executive Vice President, New Africa Advisors, USA*

In his closing remarks, Mr. Mpare informed the workshop that the Chicago Board of Trade has offered to assist Ghana to establish a futures exchange along the following lines:

- Structuring the Exchange and Clearing House
- Establishing a world-class financial guarantee structure for the Clearing House
- Structuring and soliciting insurance coverage from an international reputable underwriter.
- Structuring and soliciting a guarantee facility from a multi-lateral institution or syndicate of international banks
- Structuring and soliciting concessional financing for the costs of the Exchange and Clearing House
- Developing credible business plans
- Obtaining a credit rating from an international reputable rating agency
- Assisting in the initial share offering of the Exchange and Clearing House
- Making recommendations on how to structure and streamline efficient derivatives regulatory practice
- Providing lobbying for derivatives legislation and tax treatment
- Giving comprehensive recommendations on the Exchange and Clearing House bylaws
- Providing a proprietary software to manage risk
- Assisting in contracting and selecting an internationally recognized advisor on futures and options software programmes suitable to the Ghana environment.

In terms of operations they will be able to:

- Look at the trading rules of the Exchange
- Assist in the selection of lead executives
- Assist in design of optimal futures and options instruments
- Assist in the design of an international marketing plan.

A similar offer of assistance has been received from the South Africa Futures Exchange (SAFEX).

## ANNEX A

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### GHANA FUTURES EXCHANGE PROJECT

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#### TERMS OF REFERENCE FOR A FEASIBILITY STUDY

##### BACKGROUND

The Ghana Futures Exchange Project was initiated in 1997 through a pre-feasibility study commissioned by the Ghana Stock Exchange and supported by the Secretariat of the Financial Sector Adjustment Programme (FINSAP). The need to examine the viability of a futures exchange in Ghana has to be seen in the context of the ongoing structural changes in Ghana's economy. Since the mid-1980s, Ghana has implemented an economic reform program which has seen an increasing reliance on the market. The financial system has undergone a far-reaching reform, which has seen the strengthening of the regulatory environment through the passing of various laws, the set-up of the Ghana Stock Exchange, the establishment of a floating currency regime and the liberalization of interest rates by removing administrative ceilings on credit and interest rates, and the introduction of a weekly treasury bill auction.

The success of the rapid shift to a market-based economy has created new risks in the market place without a concomitant development of opportunities to hedge these risks. Historically, such price risks have existed in the agricultural sector and were partially resolved through the set up of marketing board arrangements for important commodities, such as cocoa and minerals. Other commodities, such as corn, were not subject to marketing board arrangements.

The recent liberalization of the financial sector has introduced additional types of price risk. Importers, exporters and financial institutions involved in international trade are now exposed to the hazards of exchange rate risk with no opportunity to hedge such risks. The liberalization of interest rates have also created interest rate risk for investors, financial institutions and borrowers, who now have to worry about sudden changes in interest rates. Finally, while the establishment of the Ghana Stock Exchange expanded the opportunities available in Ghana for investors, they now have to live with significant price volatility. This has dampened investor interest, especially by institutions and funds which now need mechanisms for protecting the value of their stock portfolios.

It is against this background that the pre-feasibility study was undertaken. The results of the pre-feasibility study established a preliminary basis for a futures market in Ghana to provide participants in the commodity and financial markets with an opportunity to

manage their price risk. A workshop on the pre-feasibility report was held to promote discussions on the issues that needed to be addressed in a formal feasibility study for the futures exchange. The key issues raised by participants for consideration in the feasibility study are identified in the summary of key outputs of the proposed feasibility study. It is now proposed to engage consultants to prepare a formal feasibility study and an action plan, if warranted, to enable a futures exchange to be established in Ghana within two years.

## **OBJECTIVES**

The objectives of the feasibility study will be to examine in detail all the key issues that must be addressed for the establishment of a futures exchange in Ghana. Specifically, the study will focus on technical feasibility, market feasibility and financial and economic feasibility.

### *Technical Feasibility*

The technical feasibility issues to be addressed include:

The feasibility of charging the Securities Regulatory Commission (SRC) to Securities Commission (SEC) to regulate also the Futures Exchange and related products.

An assessment of the legal framework within which futures trading can take place.

Recommendation of appropriate legislative action to provide an updated legal framework to accommodate futures trading.

Recommendation of a system of authorizing and licensing Futures Commodity Merchants (FCM) and members of the proposed futures exchange including recommendations for minimum capital requirements, professional qualifications and professional ethics.

Determination of an appropriate trading system

Potential members of Ghana Futures Exchange (GHAFEX) and its associated Clearing House

Linkage with the Ghana Stock Exchange

The requirements for training of market participants and public awareness

### *Market Feasibility*

This covers the identification of potentially tradable commodity contracts. For each commodity, this would include:

an estimate of the market potential including current and prospective supply and demand and the key Buyers and Sellers

a documentation of currently available grading standards and suitability for use in a futures contract

current storage facilities and warehousing receipt systems and identification of needed improvements of the receipt system

Method of settlement (physical delivery versus cash)

For financial futures products, this includes identification of tradable financial futures contracts

### FINANCIAL FEASIBILITY

The Consultant is expected to evaluate the financial feasibility of the exchange. This feasibility should take into consideration the need for the exchange to be financially self-sustaining in the long run.

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## SUMMARY OF KEY OUTPUTS

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The Consultant will provide the following key outputs:

An analysis of the business and economic environment and the manner in which the proposed futures exchange will support the business environment;

The structure of the futures exchange including various alternatives for membership; i.e., whether membership should be individual or institutional, and the qualifications for the membership;

Recommendations on whether the Ghana Futures Exchange should be a separate exchange or whether it should be combined with the Ghana Stock Exchange in a single securities exchange;

- In cooperation with the Ministry of Finance, Bank of Ghana and the Securities Regulatory Commission, identify options for regulating the futures exchange. The options to be considered should include either a new regulatory agency or a regulatory system under an amended Securities Industry Law with the Securities Regulatory Commission as the regulator; and whether the regulatory body should be simultaneously set up or wait until a self-regulatory exchange is set up and running for some time.
- Provide recommendations on needed amendments to ancillary laws, such as the Companies Code, 1963
- The relationship between the Futures Clearing House and the Futures Exchange; and if these are to exist as separate entities or limited under a single institution;
- Marketing Analysis: Estimation of the size of the market for the identified products of the futures market? This should consider the entire range of potential futures products □ financial, agricultural and any other products on which futures contracts can be written; and an identification of the likely buyers and sellers of the futures contracts.
- Input Requirements: The Consultant should identify the human resource, technological and other physical inputs required for the operation of the futures exchange, with projections on costing and timing of requirements;
- Organization: A recommended organization structure showing how the futures exchange will be managed.
- Project implementation strategies, including funding of the futures exchange project, phasing of various components of the project, and the training of key management personnel.
- Evaluate the viability of the Ghana Futures Exchange becoming the futures market for the ECOWAS region by identifying potential opportunities, as well as constraints.
- Clarification of taxation of futures transactions within the existing tax regime, with recommendations for necessary changes.
- Financial and economic feasibility: The Consultant is expected to present realistic financial projections on the likely revenues and expenses of the futures exchange, indicating the likely break-even point and how the exchange might be financed prior to the break-even point.
- Training and Public Education Program: The Consultant is expected to identify the requirements for the public awareness campaign and the training for professionals

in financial institutions and traders, regulators and policy makers.

Identification of existing interventionist policies affecting price discovery in the financial and agricultural markets which may impede the development of the futures market, and recommendations for their elimination.

*Resources*

The assignment will involve about 12 man-months, to be provided over a period of 6 months.

*Skills:*

The Consultant will be a reputable financial services consulting firm with experience in the design and implementation of securities markets and specifically derivative markets. Previous experience in the preparatory work for the set-up of a futures exchange especially in an emerging market would be necessary. Preference will be given to firms which have local partners.

## ANNEX B

### LIST OF PARTICIPANTS

NAME	ORGANISATION
1. K.Dapaah-Siakwan	Ghana Commercial Bank
2. J.Ofori-Teiko	CAL Merchant Bank
3. Frank Adu	CAL Merchant Bank
4. Richard Vander Puije	Accra Nominees Ltd.
5. Emmanuel K.T.Frempong	MOFA, Accra
6. George K.Nsiah-Gyan	Institute of Chartered Accountants
7. Christian Akuamoah	Home Finance Company
8. Lloyd Evans	Daily Graphic
9. Samuel Kofi Manu	University of Cape Coast
10. John Hansen	Business & Financial Times
11. F.Badasu	Bank of Ghana
12. S.D.Amegashie	Bank of Ghana
13. Kojo Ohene Obeng	Bank of Ghana
14. Sampson Asare	Bank of Ghana
15. Kofi Amoah-Awuah	Bank of Ghana
16. Clint Nartey	Ghana Chamber of Mines
17. Kwame Yeboah	Precious Minerals Marketing Co.
18. K.Effah	Precious Minerals Marketing Co.
19. Kwodwo Edisi Ampofo	Emos Consultancy
20. Emmanuel Antwi	SSB Bank Ltd
21. Edward Marfo-Yiadom	University of Cape Coast
22. J.K.Forson	Deloitte & Touche
23. Mark Atta Owusu Jnr.	First Atlantic
24. Bernard Bright Davis	First Atlantic
25. Karen Akiwumi Tanoh	Ecobank Ghana
26. Mike Ashong	Ecobank Ghana
27. Mabel Ako	Ministry of Justice
28. Gertrude Torkornoo	Sozo Law Consult
29. Valerie Amate	Ministry of Justice
30. Yaa Akyena Attafua	Ministry of Justice
31. Kofi Agyen Boateng	World Bank
32. Emmanuel Martey	Ghana Cooperative Bank
33. Sampson Addae-Boateng	Ghana Cooperative Bank
34. Jacob Arko Saah	Registrar Generals
35. Jemima Mamaa Oware	Registrar Generals
36. Robert Nanchindi	Bank of Ghana
37. Jacob Ofori-Koree	Cocoa Marketing Co. Ghana
38. Dramani Egala	Cocoa Marketing Co. Ghana
39. Ofori Buansi	Sterling Securities Ltd
40. Kofi Owusu Forfie	Sterling Securities Ltd

41. Fati S.Yakubu	Sterling Securities Ltd
42. Kofi Adjei Sowa	Shareholders Association
43. Beatrice Dovlo	Sigma One Corp.
44. Joseph Goodwin	Sigma One Corp.
45. Clifford Mpare	Sigma One Corp.
46. Barbara Gbologah-Quaye	Sigma One Corp.
47. Reginald France	Sigma One Corp.
48. Michael Sudarska	Sigma One Corp.
49. Ebenezer Aryee	Sigma One Corp.
50. Felix Anyinsa	Merchant Bank Gh. Ltd
51. S.Acquaye	Merchant Bank Gh. Ltd.
52. Lilian Atakora	Merchant Bank Gh. Ltd.
53. Michael Adongo	BCM Gh. Ltd Bibiani
54. Raymond Akakpo	Standard Chartered Bank
55. Peter Iiasu	Standard Chartered Bank
56. Kwame Gazo Agbenyadzie	Metropolitan Insurance
57. Victor Boakye-Bonsu	Metropolitan Insurance
58. J.A. Asamoah	Cocobod
59. M.J. Ablorh-Quarcoo	Cocobod
60. Ken Brew	Cocobod
61. Fred Nuer	Securities Discount Co.
62. Adu Anane Antwi	C/o GNPA
63. Comfort Ahwoi	Bank of Ghana
64. Emmanuel K. Nti	Bank of Ghana
65. Daniel Attuah	Joseph's Foresight Ltd.
66. Patricia Asaam	Securities Regulatory Commission
67. Ekow Acquah-Arhin	Securities Regulatory Commission
68. Margaret Tuwor	Gold Coast Securities
69. Kwame Ofori	Gold Coast Securities
70. Theresa Buagbe	Gold Coast Securities
71. Osei Asafo-Adjei	The Trust Bank
72. Dr. Augustine Asmah	Cape Coast
73. John Hansen	Business & Financial Times
74. N.A.B Korsah	Agric. Development Bank
75. Jay Salkin	Sigma One Corporation
76.S.Y. Bortsi	MOTI
77. Mr.Kofi A. Osei	School of Administration
78. Martin Mensah	Ghana Commercial Bank
79. Kassoum Konate	World Bank, Abidjan
80. Kwame A.Q. Aboagye	University of Ghana
81. A.K. Nyame-Baafi	MOTI
82. Ebenezer Barnes	Sem International Associates
83. Martin Asamoah	CDH Securities Limited
84. Naa Odey Asante	AFTECH Consultancy Ltd
85. Peter Acquah	Standard Chartered Bank
86. Enyonam Dovlo	AFTECH Consultancy Ltd.

# **PROGRAMME**

**WORKSHOP ON  
THE ESTABLISHMENT OF A**

# **GHANA FUTURES EXCHANGE**

**JUNE 10 & 11, 1999**

**VENUE: NOVOTEL HOTEL**

## **SPONSORS**

- GHANA STOCK EXCHANGE
- SECURITIES REGULATORY COMMISSION
- COMMODITIES CLEARING HOUSE
- USAID/SIGMA ONE CORPORATION
- BANK OF GHANA

## OPENING CEREMONY

- 8.30 - 9.00 a.m. - Arrival of participants
- 9.00 - 9.05 a.m. - Introduction of Chairman - Ghana Stock Exchange Official
- 9.05 - 9.10 a.m. - Chairman's Response
- 9.10 - 9.20 a.m. - Short Address by Mr. Yeboa Amoa - Managing Director/Ghana Stock Exchange
- 9.20 - 9.35 a.m. - Key Note Address by Guest of Honour
- 9.35 - 9.45 a.m. - Chairman's Closing Remarks  
Dr. Charles Asembri - Director-General  
Securities Regulatory Commission

9.45 - 10.00 a.m.

- TEA BREAK



## MORNING SESSIONS

10.00 - 11.00 a.m.

Session 1 -

**Overview of a Futures Market**

- 2 presenters
- 1. Dr. Sam Mensah, Financial Economist/Technical Adviser - CDH Securities Ltd.
- 2. Mr. David Stuart Rennie, Former General Manager/ Commercial Union Investment Management (SA) Ltd.

11.00 - 11.30 a.m.

- Discussions  
Chairman - Mr. Yeboa Amoa  
Managing Director,  
Ghana Stock Exchange

11.30 - 11.35 a.m.

BREAK

2.

11.35 – 12.35 p.m.

Session 2 -

### **Futures Market Regulation**

2 presenters

- 1. Mr. Conrad George Bahlke,  
General Counsel, Schultz, Roth  
& Zabel, New York, USA.
- 2. Ms. Eudora Quartey –  
Deputy Director General  
Securities Regulatory  
Commission

12.35 – 1.00 p.m.

- Discussions
- Chairman – Mr. E.P.L. Gyampoh  
Gyampoh & Co. Solicitors  
Mobil House, Accra

1.00 p.m. – 2.30 p.m.

- Lunch



## **AFTERNOON SESSION**

2.30 p.m. – 4.30 p.m.

Session 3 -

### **Interventionist Policies in the Agricultural and Financial Markets**

4 presenters

- 1. Dr. J. Dirck Stryker,  
President, AIRD Consulting
- 2. Dr. S. K. Dapaah - Chief  
Director - Ministry of Food &  
Agriculture
- 3. Dr. D. O. Andah – Director,  
NBFI Dept., Bank of Ghana
- 4. Dr. J. B. Goodwin – Chief of  
Party, Sigma One Corporation

4.30 p.m. - 5.30 p.m.

- Discussions
- Chairman – Dr. P. Kuranchie –  
Managing Director - Agriculture  
Development Bank



ANNEX D

TECHNICAL PLANNING COMMITTEE

1. Chairman - Dr. Sam Mensah, Technical Advisor, CDH Securites
2. Member - Dr. Jay Salkin, Senior Monetary Economist, Sigma One Corporation
3. Member - Mr. Ekow Afedzi, Senior Manager, Ghana Stock Exchange
4. Member - Mrs. Theresa Ntim, Director, Financial Markets Department, Bank of Ghana
5. Member - Ms. Eudora Quartey, Deputy Director – General, Securities Regulatory Commission
6. Member - Mr. Alexis F.K. Aning, Aftech Consultancy Limited