COMMODITY FUTURES EXCHANGE

AN ASSESSMENT AND CONCEPTUAL FRAMEWORK FOR ESTABLISHING A COMMODITY FUTURES EXCHANGE IN EGYPT

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Acronyms

CM	Cash Management
CMA	Capital Market Authority
Demat	Dematerialization
DP	Depository Participant
EFS	Egypt Financial Services (USAID-financed technical assistance project)
FSVC	Financial Services Volunteer Corps
IOSCO	International Organization of Securities Commissions
MOI	Ministry of Investment
MTM	Marked-to-Market
R&T Agent	Registrar and Transfer Agent
T+1	Or T+ any number “x,” refers to time plus one day, or time plus x days
WH	Warehouse

Executive Summary

The topic of this report is a commodity futures exchange framework, the viability of having a commodities futures exchange in Egypt, and if so, what is the conceptual framework for moving forward.

Advancing the activities related to establishing the framework of a commodity futures exchange revolves around satisfying the question as to whether or not there is a legal basis for a market. If there is a basis, then there will need to be preparatory activities by both the public and private sectors. The task for the government is to prepare the process for licensing and regulating the industry. The task for the private sector will be to undertake the work and cost to establish the business that is a market, and to begin attracting customers, who will be the buyers and sellers in the market.

Establishing a commodity futures exchange in Egypt will best be accomplished using rapid mobilization and simultaneous execution of many activities. It will probably happen most expeditiously if the process is undertaken as revolutionary instead of evolutionary. An evolutionary effort would be to use traditional channels, existing authorities, to allow for a multitude of existing ministries and authorities to exercise control or to compete for control of aspects of the process, and to use the power of the government to create an exchange. A revolutionary approach would be to make one ministry responsible, in this case the Ministry of Investment (MOI), and charge it with creating or confirming the legal basis for having the market, and for establishing the regulatory system. In this way it will create the environment in which the private sector can create the commodity futures exchange. Other than the legal and regulatory framework, the Ministry's responsibility will be to allow, facilitate, encourage, and observe as the private sector creates the market.

While this report discusses a brief and sufficient assessment of the commodity market in Egypt, and the broader conceptual framework of a commodity futures exchange, this executive summary focuses on the next steps that need to be taken to establish an exchange.

- This first step must be accomplished before undertaking any of the other proposed activities. It is to determine if there is a legal basis for the establishment of a commodity futures exchange. That determination will need to examine two separate questions:
    - Is there a legal basis for executing the business activities that are associated with an exchange?
    - Is there a legal basis for authorizing the government to establish a regulatory entity that would oversee a commodity futures exchange?

  It is quite likely the answer to the first question is yes. It is not as clear that the second question will have a clear and positive determination that there is a legal basis.
    - If there is not an appropriate legal basis, then the next step, prior to proceeding with other activities, will be to draft appropriate legislation and work for its passage.
    - If there is a legal basis, then proceed with the activities for establishing a commodity futures exchange.
- Establish a core work group. This group will have several key tasks. One will relate to improving the legal framework. One will deal with working with the private sector and developing the elements of an invitation for proposals to set up a commodity futures exchange and specify the criteria that will be used to judge those proposals. Another area of focus will be to set up the regulations for overseeing the commodity futures

exchange. Finally, there will be a group for setting up the physical and organizational infrastructure of the exchange, with particular emphasis on the information technology required.

- Encourage the mobilization of the private sector and initiate open dialogue regarding the formation of a commodity futures exchange.
- Identify a core group of consultants that can assist the MOI with strategy and implementation of the legal and regulatory system.
- Begin the process of education, site visits to existing exchanges and observing regulatory systems that are currently in action. Ideally, this should be done accompanied by the consultants that will assist the MOI in the processes outlined in this report. If possible, a legislator from parliament should be invited so that when the process of passing the law is underway; there will be an ally in parliament who will understand the background and intention.
- Release an invitation to the private sector to submit proposals for establishing a commodity futures exchange. This should be done based on the publication of clear criteria for the contents of a proposal and the process whereby they will be evaluated by the MOI. Importantly, the GOE should not try to pick winners. As an example, when people apply for a driver's license, the criteria for issuing a license is whether or not the person meets the physical requirements, has a history of legal conduct, and can pass an exam. The government does not try to pre-determine which applicants will be the best drivers. If an individual meets the requirements, a license is issued. That should be the same general philosophy here. If a consortium can meet the qualifying criteria, the government should license it to operate a commodity futures exchange without trying to decide if there is a better option, or deny the license because there is some other group that also has a license.
- Authorize appropriate consortia to establish exchanges.
- Continue a process of open dialogue with the public sector which the market infrastructure and systems are established and while the MOI team is constructing the physical and systems structure of the regulatory body.
- Initiate the process of regulation.

With regard to the question of cost, the cost to the government will be the cost of staff time, the cost of offices for locating the regulatory body, the cost of the staff for the regulatory body, as well as operating expenses, and the cost of the information technology needed to operate the regulatory body. There will be initial expenses for staff time to evaluate the legal framework and the cost of site visits.

The major cost of establishing a commodity futures exchange will be borne by the private sector and will include all of the costs associated with setting up the business in accordance with the approved design, including the elements outlined in this report. It will likely require an investment on the order of tens of millions of dollars.

Commodity futures exchanges are benefited if there is a healthy, efficient cash market. The cash market in Egypt is deficient. One manifestation of that deficiency is the common complaint that the intermediaries get all the profit. There is some truth to that, but not because they are bad people. It is because the cash market is not set up to be efficient. In Egypt, intermediaries assume more risk than would be the case in an efficient market, and they provide services that are not required of intermediaries in efficient markets. In parallel to the activities outlined above, but not as a responsibility of the core team, there are two actions that can be taken to improve the cash markets and thereby improve the basis for a commodity futures exchange.

The first action is highly beneficial and has a very low cost relative to the benefit to the economy. It is to establish a system for capturing, processing, and disseminating wholesale market prices, nationwide, on a daily basis. In addition to strengthening the underlying economic basis for the non-perishable commodities traded in a commodity futures exchange, this will also greatly benefit the perishable agricultural commodities sector.

The second action will be more costly and require more organization. It is to establish a spot or cash exchange or a series of exchanges. This would typically be an organized auction for presenting significant quantities of product simultaneously, either in person or electronically, to potential wholesale buyers who would then bid for the purchase. The dissemination of these prices would be incorporated into the price dissemination system.

Preface

The government of Egypt, and specifically the Ministry of Investment (MOI), is interested in establishing a commodity futures exchange. The MOI has committed to the establishment of a commodities future exchange to serve the national public interest, by providing a means for managing and assuming commodity price risks, discovering prices, or disseminating pricing information through liquid, fair and financially secure trading facilities, and to promote responsible innovation and fair competition among market participants.

Before presenting this report, it is useful to establish some background information that will provide a common understanding as to what futures markets are, how they function, and the appropriate role of governments.

First, futures markets operate in the private sector but need the participation of the public sector to function properly. The government is a necessary participant, ensuring rules are appropriate and enforced, and the "playing field" is properly maintained. The private sector should "play" the game. If the public sector injects itself into the actual market, then the result will be unwelcome and as harmful as a referee scoring goals in a soccer match.

Second, the concept of a futures market is probably most easily understood by describing the conditions that led to the establishment of such markets in the first place.

A producer of seasonal non-perishable or semi-perishable agricultural commodities has an age-old dilemma: taking his harvest to market when all other producers also take their product to market. This will create a condition in which there is more product available than can be absorbed by the buyers in the market. It is a condition of over-supply causing prices to fall and the farmer to receive an inadequate return for his product. The buyer of that commodity faces the opposite problem: for part of the year, there will be scarcity of product in the market. There will not be enough of the product available to satisfy the combined demand of all the buyers. This is a condition of under-supply. As a result, buyers may compete fiercely for the available product, causing prices to rise. Over the course of a year, these price fluctuations can be very large. They may even rise so high that the cost of doing business for some potential buyers exceeds the break-even point for their business. Without some way to moderate these problems, it can be difficult to sustain growth, manage cash flow problems, and generally manage risk in such a way as to make an industry sustainable. Futures markets provide a way to help manage this risk.

Then, imagine a buyer and a seller (in this case, let's say it is a farmer) who enter into an agreement. The buyer agrees to buy a specified quantity and quality of the farmer's product on a specified date. They agree on a price that is higher than the farmer expects he could get if he brought his product to market and sold it on the spot, at the same time all the other farmers were also trying to sell the same product from their farms. The conditions of this contract could include a payment, up front, that is sufficient to allow the farmer to cover costs of producing the product, without having to seek other financing. Or, the very fact that the farmer holds the contract may be sufficient collateral for him to obtain financing through the normal lending market. The buyer agreed on that price because it is a price that he believes will guarantee he has product for an extended period at a price that keeps his business profitable throughout the period, even including the cost of storing the product. It may be higher than he expects to pay when there is over-supply and less than he would expect to pay when there is under-supply. It allows him to better plan his business, and removes the risks he would face if he went to the

market every day and bought the product, on the spot, for what he needed for his business that day.

Now suppose the businessman, for whatever reason, observes that the expectations are that this year's harvest will be poor and that the price of the product will be high, higher even than what he agreed to. He might agree with another businessman (buyer) to sell him the contract that he holds for a price that is higher than what he paid, and advise the farmer to deliver the product on the agreed upon date, to the new buyer. The first businessman might get the bright idea that arranging similar contracts with other farmers and then selling those contracts, for a profit. Over time, he might discover that it is a good business to charge a fee to provide the contract and to allow farmers and businessmen to come to his store to transact their business, with certain guarantees he might provide to make sure the transactions are properly honored. Some of the businessmen who purchase a contract might never expect to receive the product at all, but simply wish speculate that the value of the contract will increase. They will hold the contract until the value of the commodity rises, and then exchange, or sell the contract to another businessman. By opening this trade in contracts, our first businessman has established a futures market.

Not specifically covered in these examples is the practice of hedging as a risk management strategy. At the end of this report is a section on definitions. An explanation of hedging may be found there.

There are many modifications and complexities that now exist in futures markets, far beyond these simple examples, but the same basic elements will be present in all of them. There must be an underlying commodity. There is a contract for the future delivery of that product. The contract can be traded.

More formally, a futures market, usually an auction, is a market that provides for the anonymous trading of a standardized contract to purchase or sell an underlying reference commodity at a future date and which can be offset unilaterally, usually through the clearing system by the purchase or sale of another contract with an unrelated counterparty. The underlying commodity must be transferable property interest, as a matter of law.

Futures contracts on physical deliverables of finite supply involve a financial instrument component that is a tradable contract right (traded by deposit of a performance guarantee or margin) and a commercial contract into which the financial instrument is settled that involves delivery and payment (and transportation and storage) in accordance with commercial market conventions.

There are two basic reasons that futures markets exist. The reasons are: to manage risk and for price discovery.

Section I Introduction and Background

This report is the result of a consulting assignment that was designed to work as collaboration between the MOI Senior Financial Advisor, the U.S. not-for-profit organization Financial Services Volunteer Corps and its two volunteers, and EFS and its short-term advisor. Its purpose was to assess the commodity market in Egypt and propose a conceptual framework for establishing a commodity futures exchange.

This report discusses aspects of the current situation in Egypt, generally assessing the conditions and potential relative to the formation of a commodity futures exchange. It also presents a conceptual framework of the basic elements that should be considered in establishing a commodity futures exchange. It makes recommendations of actions to be taken. It generally assumes or describes the most optimistic path and circumstances that would allow for a very rapid establishment of a commodity futures exchange, considering the MOI's deadline of fall 2007.

For the purposes of this assignment, the underlying assumption is the desire to establish a commodities future exchange, to improve the efficiency of the agricultural markets, to grow the economy, and to improve farmers' incomes.

For the purpose of establishing a common base for the use of futures market terminology, there is an Annex to this report with a few basic definitions.

In answer to the fundamental question as to whether or not Egypt can establish a commodity futures exchange, the answer is clearly "yes." It will require good management, the resolution of a number of issues, and due coordination of organizations and resources.

To use this report effectively, it is important to understand its limitations. An example will illustrate. Suppose you wish to travel to a place, but you do not know where it is, you have several options among which might be the following:

1. You can ask directions of someone who can point the way and give guidance on landmarks and places to turn. With this general information in hand, you can proceed to find the way on your own.
2. You can hire someone who knows the way to ride along with you, in your vehicle, and provide you with ongoing instructions as to the route to follow.
3. You can hire someone who knows the way, who will provide the vehicle, and take you to your destination.

This assignment corresponds to option 1. This report points the direction and gives some general guidelines. It should not be thought of as the definitive plan for establishing a commodity futures market in Egypt. Of course, the three options are not necessarily mutually exclusive of the others.

While guidance provided by this paper represents a "best effort," it should not be thought of as a final plan. It is quite likely that the fastest and most cost efficient way to establish a commodity futures market is to use all three options. This report is a starting point. In addition, knowledgeable consultants could assist in the development process, and accomplished entities could be contracted that have lived through the process of successfully establishing other exchanges.

Among the next steps that need to be taken are the following:

- Education. Engage in site visits in other countries to educate an Egyptian team on how it has been done and is accomplished. Included in the education process is the need to engage the private sector in an open dialogue immediately, keep them informed and accept input.
- Initiate work on the legal and regulatory framework. This should include establishing a dispute resolution system that is responsive, low cost, and transparent.
- Mobilize and coordinate government resources outside of the MOI.
- Develop an invitation to the private sector to submit requests for authorization to establish an exchange. This should include publicizing the evaluation criteria and systems for selecting successful offers.
- Develop a supervisory structure and systems.
- Engage the private sector in the process.

Importantly, these next steps should be undertaken in parallel, not sequentially.

Our initial observations regarding the situation in Egypt include the following key points:

- It will be important to keep the public and private sector roles clear and separate.
- The legal framework is not adequate for establishing a commodity futures market in Egypt based on international standards and best practices in other jurisdictions.
- The private sector has high interest in the existence of commodity futures exchange in Egypt.
- Among high government officials, the philosophical orientation, the level of interest, and the political will all appear favorable and forceful in favor of establishing a commodity futures exchange.
- The underlying cash market in agricultural commodities is not as strong as it ought to be, and can be improved with relatively rapid, low cost activities. The stronger the cash market is, the greater the likelihood the commodity futures exchange will function well.
- If the process is properly managed, it is estimated that an exchange could be in operation in nine months.
- The cost of establishing a commodity futures exchange for the public sector will include the cost of re-assigned staff, possible new staff, offices, travel for site visits, and the like. For the private sector, the costs could be several tens of millions of U.S. dollars.

In a “normal” context, the impetus for establishing a commodity futures exchange would arise in the private sector. In Egypt, the drive to establish a market arises from the public sector. There is nothing wrong with that, but it does give rise to the observation that the public sector will need to exercise caution that it does not over reach and attempt to do things for which the private sector should be responsible.

Whether the initiation of the process is in the public or the private sector is not the key issue. For a successful exchange to be established there must first be a business need, a demand that originates from those who wish to own a market. These are the investors who will put up the necessary capital to establish the market. After that, there must be interest (demand) on the part of traders to use the market to buy and sell.

Since the essence of a market is private sector activity, it should be kept in mind that a government cannot force a commodity futures exchange to be successful, but there is a great deal a government can do, either purposefully or accidentally, to insure a commodities future exchange can fail.

There is every reason to believe that a commodity futures exchange can and will be successfully established in Egypt in the near future.

Section II General Assessment

A. Benefits of a Commodity Futures Exchange

Commodities, particularly those that have cyclical production patterns, such as agricultural commodities, have a natural tendency to be affected by dramatic price fluctuations. The value of a commodity futures exchange is to help dampen those fluctuations. They provide a mechanism for businesses associated with that commodity to hedge, and thereby reduce their risk.

When a producer of a commodity wishes to sell his product, the foremost question in his price, the producer may have no idea what price other producers are receiving at that same time. Properly functioning futures exchanges solve that problem because they are efficient at price discovery, meaning all the buyers and sellers know the price at which other trades are occurring. The theory behind free markets is that they function best when all of the players have the same information at the same time. A commodity futures exchange does exactly that: provide the same and consistent price information, to everyone, at the same time.

At the moment, Egypt produces and sells non-perishable commodities. Over time, a properly functioning commodity futures exchange should be expected to:

- Provide greater price stability by reducing risk and increasing the number of traders.
- Increase trade volume.
- Increase trade value.
- Improve product quality because the market imposes grades and standards
- Gradually increase trade profitability to all participants because of the increased trade volume and increased efficiency. This increased efficiency can result in higher income for farmers and lower costs to consumers. A commodity futures exchange acts as an important component of a privatized, open economy to help achieve the benefits possible from free markets and free trade.
- Capture some of the trading value on other exchanges outside of Egypt
- Serve a similar function as insurance for actors in the market, through proper use of hedges.

A futures exchange, properly functioning, serves the roles of price discovery and risk management.

B. Current Commodity Market in Egypt

Agriculture is a critical and important element of the Egyptian economy. Approximately 30 percent of the population is directly involved in agriculture, and half of the population lives in rural areas. Most of the farmers are poor farmers, operating farms of less than five acres (“feddans”). Ninety percent of farmers fall the latter category. Furthermore, 80 percent work 3 acres or less. Of the 20 percent of farms larger than three acres, most are in reclaimed lands, are fairly large tracts, and are dedicated to perishable fruits and vegetables.

Most farmers will not be candidates to directly use a commodity futures exchange. Products that could participate in these markets will do so once they have been aggregated by intermediaries, be they businesses, cooperatives, or other forms of aggregation. Nevertheless, benefits from a well-functioning commodity futures exchange will be experienced throughout the commodity chain.

Egypt has an active commodities market. Examples of major products with low perish ability include cotton, potatoes, citrus, rice, wheat, corn, tobacco, sugar, and chickpeas.

For most of the last half century, Egypt operated under the scheme of a command economy rather than of a free market. Current governmental policy is to pursue a transition toward a free market, replacing command structures and practices with ones that allow for an open economy. Agriculture is one of the areas in which residual effects of the command economy are still manifest. There are still some controls related to prices. There are political pressures to cause markets to function in accordance with official policy. There are still expectations on the part of some farmers that the government is the responsible party to ensure they receive an equitable price for their product. As kind as that may appear in the short run, in the long run, world history has shown it is an expectation that perpetuates poverty.

A commodity futures exchange can assist in resolving these conditions, but it will also require concerted attention and effort on the part of the government to reduce its influence in managing prices.

Traditionally, it was thought that the underlying cash market had to be robust in order to function as a solid base for establishing a futures market. There are examples in recent history to show that is not a necessary precondition to the establishment of an exchange. Nevertheless, it is the case that a strong cash market has a positive influence on the functioning of a futures market, and visa versa.

The cash or spot market, for commodities in Egypt, needs strengthening. Toward the end of this report, more will be said about how this might be accomplished.

C. Building on Existing Resources

A commodity futures exchange does not spring into existence. There must be a base upon which to build the market. Egypt brings a number of resources to bear on the establishment of a market, including:

- A commitment on the part of the government, and an attitude favorable to allowing a market economy, including a futures market to function.
- Interest of the private sector favorable to establishing a market and a commitment to participate.
- A solid history of experience in the private sector for trading, as manifested by a healthy securities market.
- A good resource base of highly educated professionals with international experience, including in futures trading. This base of human resources extends to every aspect of a functioning market.

- Traditionally, a commodity futures exchange was a place: brokers came together in the same physical space to carry out trading. That is no longer true. The market still has to have a physical location and falls under the legal jurisdiction of a physical place. The trading floor, however, can be the world, because of electronic technology. Egypt has the information technology base necessary to support world wide trading.
- There is an existing securities market and exchange, with offices, systems, installed information technology, and so forth that could be a base for establishing a commodity futures exchange.
- The knowledge and practice of clearing also exists in Egypt, functioning at the highest professional levels, is a definite resource for establishing a commodity futures exchange.
- The Capital Market Authority is an existing regulator. There is no need to create a new one. The CMA could be given a separate division that tackles the issue of regulating a commodity futures exchange.
- Transportation systems and technology available in Egypt appear adequate, with the one exception of sophisticated cold storage that would permit "cold chain" integrity. If it turns out that potatoes are traded, a better "cold chain" infrastructure and systems will be needed. This will include temperature-controlled transport as well as warehouse storage and improved packaging systems.
- The current trade in commodities involves a chain of businesses and activities, including warehousing. While that means practices of storage are known and used, it may be that more infrastructures will be needed, or at least modifications made, designed specifically with the needs in mind of bonded warehousing.

D. Next Steps

- The Ministry of Investment (MOI) should immediately convene a legal team and charge them with one key task. The team should review existing law to see if there is a legal basis:
    - for business operations to be carried out by a commodity futures exchange
    - for the formation of a regulatory body to license and provide oversight for those business practices, if are carried out on a commodity futures exchange

  If it is determined there is a legal basis, then the other suggested steps outlined in this report may proceed. If they determine there is not an adequate legal basis, then nothing else should proceed until the appropriate legal framework has been established. If this team determines there is no legal basis then the same team could be tasked with drafting the broad enabling legislation.
- The MOI should form a core working group and invite the public sector to do the same. The core Regulatory Working Group should consist of public sector staff. This should not be a committee; rather it should be a working group, with no other responsibilities than those outlined below. If individuals must be drawn from other ministries, it must be clear their line of authority and responsibility is strictly within the working group. As the MOI has been the initiator of this activity, the MOI should be the responsible ministry. This core team of capable, motivated individuals should be charged with the public sector responsibilities for the establishment of the exchange. This core team, or appropriate members of the team, should evolve into the first iteration of the regulatory body of the exchange. From the outset, the success of this team will depend on three ultra-critical factors:

        - Number 1: The core team must be given total responsibility for the tasks outlined
        - Number 2: The core team must be given maximum authority to achieve the outcomes required in their list of responsibilities. To achieve the efficient and effective establishment of the exchange, there should not be bureaucratic delays or complications or approval processes.
        - Number 3: The core team must have complete control of the necessary resources to achieve the required objectives.
        - If it is legal and acceptable, a fourth element could be added: a performance bonus tied to the accomplishment of the objectives, and compliance with the calendar for inauguration of the exchange. The previously formed legal team should become part of this working group.
- The core Regulatory Working Group should be divided into four teams.
    - A team to produce the solicitation of interest in establishing an exchange, and set the evaluation criteria.
    - A team to establish the regulations of a regulatory body. The development of an invitation to the private sector to submit proposals will essentially be an announcement that the regulatory framework is ready, that the criteria are in place for evaluating proposals, and that the regulatory power exists to authorize petitioners to initiate and exchange.
    - A team to draft the law. The second and third teams could actually be one group, with individuals specializing in either the regulations or the law.
    - A team to establish the structure of the regulatory authority within the CMA. This would include consideration of the organization's staffing, the location and organization of its offices, the design of the internal systems, qualification system for authorizing traders, the hardware and software requirements to support the regulatory process and so forth.
- Each task group will be assigned critical tasks and given a timetable for their accomplishment.
- The other is the private sector Market Working Group. It should include a wide array of people from the private sector. This group will be apprised of the plans and progress of the Regulatory Working Group core team, provide valuable feedback, and help with both the design of the exchange as well as the interface with the regulatory body. This Market Working Group should include as many organizations as possible that may be interested in participating in an offer. It should be formed by invitation, not by requirement. No one with an interest in participating should be excluded. There should be seminars and discussion sessions involving these public and private sector groups. They should meet frequently and carry on a very open dialogue. The primary reason for this interchange is to keep the private sector as fully informed as possible regarding how the MOI is proceeding with the design of the regulatory system, its expectations regarding the structure and operation of the exchange, and to receive feedback from the private sector. This open dialogue is also important because it allows the private sector players to begin forming coalitions and designing the elements of their proposal for creating an exchange. It will keep the MOI informed as to the thinking and intentions of the private sector and avoid unwelcome surprises.
- The Capital Market Authority is a member of IOSCO. Full advantage should be taken of that membership by using the information and personnel resources

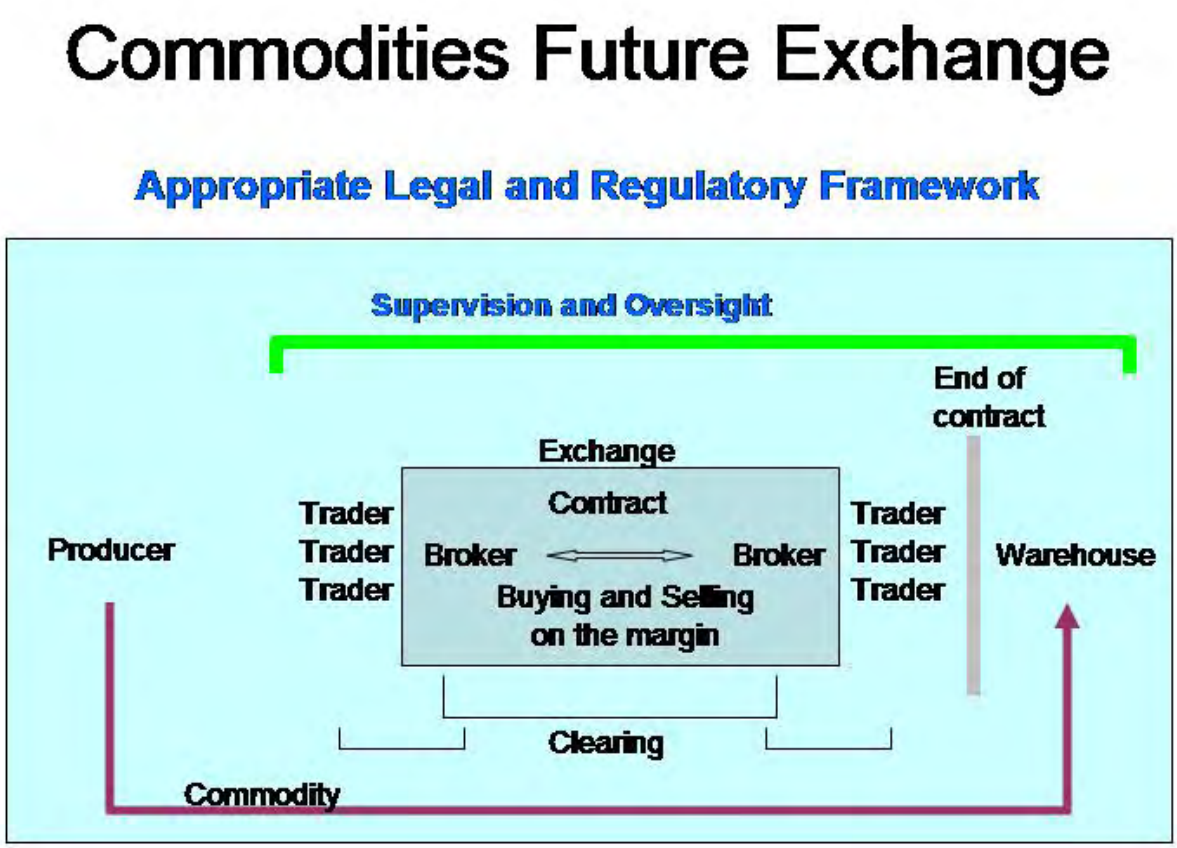
available from that organization. Furthermore the existence and experience of the CMA should be used to form the backbone of the new regulatory entity. The new regulatory entity could be a division of the CMA.

- A set of consultants should be formed to assist the core team. The EFS project has offered to assist in identifying and contracting appropriate individuals. Other donor organizations could be sought for this assistance, including the FSVC. This should include, at least, one individual who is thoroughly familiar with legal and regulatory frameworks. Preferably it would be someone who has worked as a regulator. The value of this individual is in the experience of making a regulatory body function in real application. The set of consultants should include at least one individual who is familiar with establishing a commodity futures exchange
- The education process should include site visits. These should be organized as early as possible. Ideally, they should involve the core team and all those in the line of authority up to and including the Minister of Investment. A suggestion is to include one person from the People's Assembly who could later assist shepherd the law through the process of its passage. The purpose of these visits will be to see the realities of implementing a commodity futures exchange. These visits should focus on understanding the overall functioning of the exchanges, and understanding in-depth the regulatory operations and the information technology systems. Several possibilities for site visits could be considered. The consideration for other sites should be that there is a successful commodities exchange in operation. Ideally, it should be a location where the visiting team could see an agricultural commodities exchange, a non-agricultural commodities exchange, and an exchange that deals in financial instruments. In the last few years, the financial instruments exchanges have proliferated and grown to the extent that it may be that no matter what other exchanges are established in Egypt, it is likely that a financial instruments exchange will also be established. Visiting exchanges that operate in other Arab economies would be helpful. Visiting an exchange that is new and has grown rapidly, would be helpful. Clearly the phenomenally successful experience in India would be a candidate for the latter criteria.
- In the evaluation of the proposals there may be multiple offers that pass the evaluation standards. If that is the case, it would be useful to consider authorizing more than one proposal to initiate an exchange. Just as the competition in the early presentation of proposals focuses attention and resources, similarly, in the establishment of the exchanges, continued competition should produce superior results. The more likely outcome is that multiple exchanges will persist, but with specialization. It will not likely be possible to predict those outcomes at the beginning of the process and it is best left to competition and competence to determine the outcome. It may be that a date is set for the submission of the first proposals. However, thereafter, the regulatory unit must be prepared to receive proposals whenever they may be submitted.
- Once offers have been selected and authorized or licensed to begin work, the collaborative meetings between the public and private sectors should be redoubled. The core team will continue its work on the legal and regulatory framework and systems. The private sector teams will be developing the physical, organization, and technology construction of the exchange. This dialogue will be critical in terms of avoiding surprises, and ensuring compatible linkages between the regulatory and operations sides of the exchange.

Section III Framework of a Commodity Futures Exchange

A. Components of a Commodity futures Exchange

The following illustration shows the basic elements of a commodity futures market organized into an exchange.



Starting with the producer, he produces some commodity that, at some future date, will be delivered to a destination, typically a bonded warehouse.

A trader or a broker will contract with the producer for that product, to be delivered at a future date.

The nominal owner, or the one who will own that product once the delivery date arrives, can go to an exchange and initiate a contract on the exchange for that product and initiate trading.

A producer can be a trader, who in turn can be a broker. Generally they are separate entities.

The exchange is a business: it has owners and provides a service. The service it sells is to provide a venue where authorized brokers can come together to buy and sell. The exchange writes the standardized contracts that will be used. The only element the participants add to the contract is the price. The exchange distributes price information about the trades. It provides appropriate controls so that all parties can safely, reliably, and efficiently trade with confidence. That confidence is based on assuring that trading is fair, orderly, and transparent. The execution of the trade also requires confidence in a settlement process.

In the figure above, the appropriate legal and regulatory environment and the supervision and oversight of the market, where the government should be the primary actor, are provided. Nevertheless, the mentality and operations of the government should not be to control the market, but to let the market function as it should while maintaining legality, fairness, transparency, and freeness.

A common structure of futures exchanges is that the owners are brokers. They may also license other brokers. One possible arrangement would be as follows:

Members or Brokers		
Trading Members	Trading/Clearing Members	Clearing Members

The brokers will typically have their clients. These may work under strategies of hedging, speculating, or arbitraging. They may come from any number of backgrounds, as illustrated below:

Clients of Brokers

Hedgers – Speculators - Arbitragers

Traders
Input Industries
Output Industries
Farmers / Producers
Commission Agents
Exporters / Importers

In addition, the market requires ancillary services, such as those illustrated below:

Service Providers
Warehouses Assayers Depository Participants Clearing Houses R&T Agents Logistics Providers - Transporters

Among the activities provided by the market, or provided by other businesses in conjunction with market operations, are:

- Product selection
- Contract development
- Risk management and surveillance
- Management of support technology (such as electronic access to the market)
- Warehousing and assaying
- Insurance
- Delivery
- Clearing and settlement
- Price polling
- Price dissemination

Some of these elements require further discussion because they are particularly important for the initiation of a futures market.

Futures exchanges specialize in trading specific commodities. It is a dynamic process whereby a market ends up trading those commodities. Obviously, it has to start somewhere. The initial selection of commodities should result from the consideration of a number of criteria. It works best if the market makes the determination rather than the decision being made by government determination. Useful criteria to include in the determination include:

- The product must be non-perishable, or relatively non-perishable.
- Price volatility in spot markets: the greater the price volatility in the spot market, the greater the benefit of from having a futures exchange.
- Share in GDP/Agricultural GDP: the more important the product is in the economy, the more likely it is to be a candidate for futures trading.
- Volume of production: the higher the volume of production, the better candidate the product is to being traded. It is common for futures commodities to have volumes in the order of millions of tons per year.
- Correlation with global markets: products traded in the world in the market of regional nations will likely be more successful in a futures market.
- Share in external trade: the larger the share of the product in external trade, the likelier it is to be a good futures market product.

- Government intervention: the less government intervention there is in regulating either the supply or the price, the more appealing the product will be for futures trade.
- Size of businesses relative to competition: this issue is related to concerns of government intervention. Basically, markets work best when the control is the lowest, of course assuming controls are sufficient to ensure transparency and fairness. When the government intervenes in markets, it dramatically diminishes the market's effectiveness. Similarly, if one business, or a small group of businesses, controls a large percentage of the product, then they will likely exert a heavy hand on the market. To allow a "corner" in a market is detrimental to the free functioning of the market. So, if a particular commodity is greatly influenced by one business or a small number of businesses, it is less attractive as a futures market product.
- Trader's interest, liquidity, and distribution: there must be high interest and liquidity, meaning trading volume will be high enough to sustain a market.
- Geographical spread and area under cultivation: products that are produced more widely, and with larger areas under cultivation are less susceptible to problems from weather or other damaging influences and therefore more appealing as futures commodities.
- Varieties: the varieties produced must be those that trade in very large volumes.
- National interest: products that are of national importance to the government, for which it would like to see the production of large volumes and greater trade, for the purposes of economic stability, can be more attractive, in part because of government incentives to encourage their trade. This is a delicate issue in that incentives that are seen as interfering with free trade can provoke negative reactions internationally. Incentives that can encourage the trade might be things like allowing the market to function as a free-trade zone.
- Export potential: even if a product is not being exported, if it is a product with export potential, or greater potential than is now being realized, are products that are more attractive.
- Availability/potential for development of infrastructure (warehousing, assaying, grading, sorting, transportation): those products that already have support infrastructure in place, or for which it can be readily constructed, are more attractive.

Among the agricultural products of Egypt that may be attractive for initiating futures markets are:

- Cotton
- Potatoes
- Citrus
- Rice
- Wheat
- Corn
- Tobacco
- Sugar
- Chickpeas, beans
- Nuts and seeds

There may well be others: it is likely that most of these will not trade. For instance, from this list, it may be that potato is a poor candidate. It is a commodity that is more perishable than most that are traded in futures markets. It needs cold storage and therefore the management chain is more complicated and more expensive. In Egypt, it also has the disadvantage that one producer produces about half of the total production, meaning that it would be difficult to maintain free market conditions for that product.

It is not important to give an exhaustive list here because, the final determination of the products should be made by the market, not the Government, based on the interest of traders in trading the commodity.

Even though the MOI is particularly interested in agricultural commodities, it would be well advised to allow those who will prepare proposals for starting commodity futures exchanges, to propose non-agricultural commodities as well. Leading candidates might include:

- Natural gas
- Crude oil
- Precious metals
- Currency
- Certified emission reduction units
- Cement
- Base metals

In considering products to be traded, it is not necessary they be produced in Egypt; it is not necessarily a hindrance they already are traded in other regional futures markets; it is not prohibitive the product is a net import product for Egypt. Again, the market itself will determine which products are most attractive candidates.

B. Laws

For a commodity futures exchange to function, there are several legal and regulatory elements that must exist. They include:

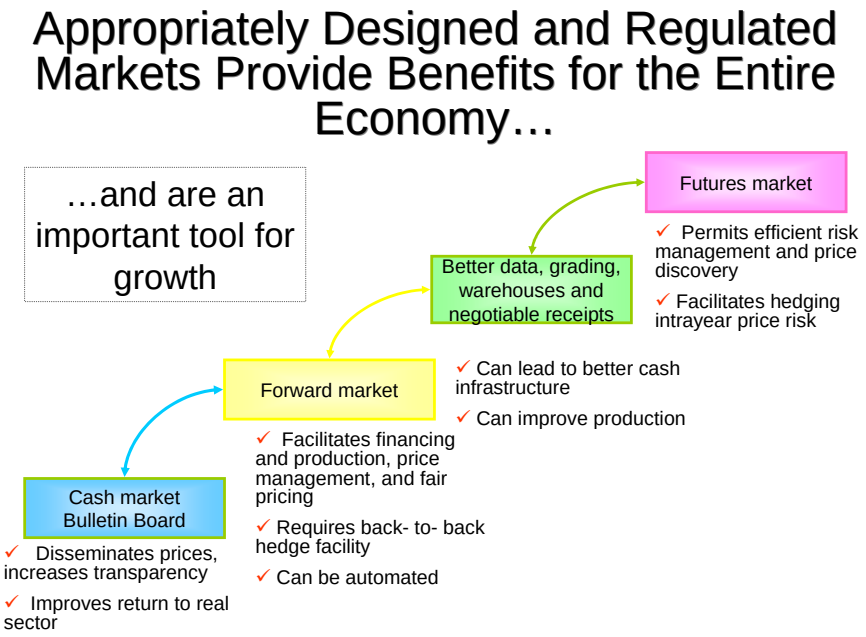
- A description of purpose, authorities, and responsibilities
- A delineation of accountability and defined limits of independence
- Defined systems of enforcement and cooperation
- Systems for authorization or licensing of markets and actors in those markets
- Rules established for the normal functioning of the market
- Rules established for exceptions

When established, an adequate legal and regulatory framework will:

- Authorize markets
- Certify the fitness of intermediaries
- Assure an ongoing basis of:
    - fair, transparent and efficient prices
    - financial integrity of brokers
    - contracts not readily susceptible to manipulation

- deterrence, detection and proportionate sanctions for fraud, manipulation, and other market abuses
- financial integrity of market (appropriate margin, risk management, clearing) and law that unconditionally supports the integrity of clearing arrangements and the treatment of margin by the clearing house

The following figure illustrates how properly regulated markets contribute to one another and to the economy in general:



A full presentation of best practices related to the legal and regulatory structure should be studied in other markets and reviewed with IOSCO principles.

At the moment, in Egypt, there is not a law specifically authorizing the establishment of a commodity futures exchange. The '94 law applies only to the spot market of one single agricultural commodity: cotton. It is one option a legal team be assembled to draft a new law, rather than proceed to a timely evaluation of the options for the legal basis for a commodities futures exchange. Instead of a new law, there are three possibilities:

1. Establish a commodities futures exchange only for cotton, as allowed by the law. This would have the advantage of a rapid start, with the legal justification in place. It has the disadvantage of limiting the exchange from handling other commodities that the private sector might be interested in trading. In fact, it may be that the market determines that cotton is not an attractive commodity for trading, in which case the market will fail.

If it is determined to use this option, the '94 law should be carefully reviewed, by the legal team, to make sure it has the necessary provisions to allow a futures exchange to be established with all the characteristics needed to achieve success.

2. Review the existing commercial law for the legal basis of having futures exchanges. The basic questions are ones like the following:

- Does the current commercial law allow for one person to sell a commodity to another? The answer must be “yes” because it is done all the time, but the legal provisions should be identified.
- Does the current commercial law cover the legality of such a sale being made using a contract? Again, the answer must be “yes,” but the legal provisions should be identified.
- Would the current commercial law permit the contract to provide for the future delivery of the product specified in the contract?
- Would the current commercial law allow the party identified as the buyer in the contract, to sell the right to receive the product at the future specified date, to a different buyer?
- Could the buyer or seller of the contract be a business rather than an individual?
- If such transactions are legal, what governmental entities would be responsible for licensing the businesses to do business or to oversee the legality of the contractual transactions?

If these questions can be answered to indicate that the transactions are legal and that there is appropriate government oversight, then there is a legal basis for doing the fundamental business of a futures market. This line of questions does not address the ancillary businesses that would have to operate in support of a futures market, such as clearing and bonded warehousing, but the basic operation of those businesses should also find a basis in Egyptian commercial law.

The team should identify negative elements such as:

- international monetary transactions are overly controlled
- system of taxation directly injected into the trading process
- the corporate veil of market participants is inappropriately lifted

3. Even if it is determined that there is a legal basis for doing the business of a futures exchange, it would still be useful to proceed with the process of drafting a law or amendments that bring all of the elements together in one new or existing law in an unambiguous fashion, that specifically and directly addresses a futures exchange, market infrastructure, and the attendant businesses that support them. The law should provide general authorization for the existence of futures markets and specify the responsible government offices for licensing and oversight. In its drafting it should be broad and general, but cover all the necessary elements.

It will be advisable to obtain samples of the laws of other nations that establish a specific law that unambiguously authorizes futures markets and sets the general dimensions of operation and governmental supervision. It is also advisable to ensure the legal foundation, be it a law or amendments, address the “legal risk” related to enforceability, and conform to international standards such as those of the Group of Thirty on global derivatives, IOSCO on screen-based trading and prudential securities regulation, and of the Bank for International Settlements.

Assuming that legal justification can be confirmed under current law, and a futures market is initiated with that justification, the existence of a successful market may make the passage of the future law easier, as it will be seen as not as something new, but as a

device for pulling all the relevant legal justification into one law to support an activity that already exists.

While the following list is not necessarily complete, it is a guide that can be used to initiate the legal review. The following are laws or conceptual areas of legal interest to examine for their relevance for justifying the initiation of a futures market:

- Capital market
- Central securities, depository and registry laws
- Cotton
- Tax (income tax/finance act/service tax/excise act/sales tax/VAT)
- Regulation of foreign currency, investment
- Contracts
- Commodity and price control enactments
- Information technology
- Intellectual property
- Agriculture produce marketing
- Food quality
- Warehousing and storage
- Insolvency and bankruptcy
- Other commercial laws, laws specifically related to agriculture, legal resource for non-Egyptians, and trade laws or treaties.

This examination of these laws should focus generally on two questions:

1. What do the laws permit?
2. What do the laws prohibit?

There is a good likelihood that the commercial aspects of establishing and operating a commodity futures exchange are covered under existing law. It may be that the more difficult issue is to determine the legal basis for the government to provide proper oversight and regulation of the activities.

Two aspects of establishing the appropriate legal basis that comes to mind that may invite special attention are:

1. Will non-Egyptians be given full rights to participate in the commodity futures exchange?
2. What will be the monetary currency used in the market?

With regard to the first, it will be easy to say that everyone will be allowed to participate. However, the legal review must include consideration of the question as to whether or not non-Egyptians can, in fact, enjoy equal legal rights. It may be that the interest in establishing a commodity futures exchange is, appropriately, to bring benefits to Egyptians. It would be a mistake to think that this desire be inappropriately extended to think that the best way to accomplish that would be to restrict market participation only to Egyptians. That could well be a market-killing decision.

With regard to the second, if the market were to be denominated in U.S. dollars, it will have an automatic effect of attracting greater trade. International arbitragers will find the

market much more attractive if the issue of exchange rates, and therefore of currency risk, is removed from the calculation of risk and settlement time frames. International traders will likewise be more attracted because they will be able to operate from a familiar basis that facilitates risk estimations and account management.

Finally, one last word is in order regarding the legal framework. Perhaps it is also the most important observation. If the commodity futures exchange is not protected from the current system of dispute resolution in the courts, it will not be as viable as it could be. Court cases in Egypt take time and carry a cost. It is unreasonable to expect the legal system of Egypt will be streamlined just so a commodity futures exchange can function well. Therefore, in the design of the legal and regulatory framework for a commodity futures exchange, special attention must be given to how to accomplish dispute resolution expeditiously and at low cost without depending on recourse to the judicial system. Only the most extreme cases for which there is no other option or for which all other options have been exhausted, should proceed to the courts. Those cases that proceed to court should be the rare exception and the only remaining option for dispute resolution. If properly operated, the decisions of the market dispute resolution system should carry heavy evidentiary weight in a court.

C. Regulations and Oversight

Of all the discussion related to the functioning of futures markets, this section is the one that most pointed relates to the ongoing involvement of the government with the market. It is especially important to note that regulation and oversight do not mean forcing or guiding the market to act in accordance with national policy and interest on pricing.[1] There will be times that the prices do not conform to the desires of the government. The government should not think of the market as the problem. It should consider the market as simply a measuring device of an undesirable economic condition. The government should seek to discover what is the underlying undesirable condition and work to restore or correct the underlying problem. The underlying condition will not be resolve by direct intervention in the functioning of the market.

The purpose behind the regulatory structure is to guarantee market integrity. Well done, regulations promote confidence by providing a framework that assures sound, fair, efficient trading where violations are quickly detected and resolved. Customers must feel protected. The regulations should reduce the potential for market accidents or risks not directly related to the underlying business of the commodity and its trading.

Regulators should maintain a certain mindset. That mindset should be to design regulations that are based on principles and that are directed specifically at protecting market integrity. The idea of being principle based is that it is impossible to conceive, in advance, all the ways a person might try to manipulate the market or otherwise act deviously. Therefore, the regulations should be based on principles with the flexibility of the enforcement and surveillance mechanisms to interpret unforeseen behaviors in light

[1] While strong emphasis is made that government must not attempt to control a futures market, there certainly are instances of national security or extreme national policy issues that can directly affect a futures market. For instance, if there is a condition of belligerence with another state then trade in the futures market would have to conform to national policy in this regard. However, such circumstances of direct intervention in the market by government should be exceptional.

of those principles instead of having specifically regulated that particular behavior with foresight. In the same sense, keeping a risk based focus on the regulations helps avoid the temptation to regulate so as to guide the market to act in the direction of some political or economic agenda. As an example of core principles, the following figure is taken from the core principles of the U.S. regulations.

This illustrates the idea of defining a principle then allowing the regulator to determine if a specific behavior, whether it has ever been specifically mentioned in the regulations or not, constitutes a violation of the principle.

Core Principles

- Comply with core principles;
- Enforce rules,
- Prevent listing of contracts subject to manipulation;
- Monitor trading for trading abuses and price distortions;
- Monitor settlement;
- Establish and enforce position limits;
- Establish rules to address emergencies;
- Have resources to provide information to the public;
- Disseminate price, open interest and volume;
- Provide open and competitive execution;
- Maintain records of trading;
- Have rules to address financial integrity and protection of customer funds;
- Design and oversee dispute resolution;
- Design and oversee fitness of governance;
- Avoid conflicts;
- Protect diversity of interests;
- Oversee a mutual board;
- Retention of records;
- Avoid unnecessary restraints of trade;
- Enforce rules to address improper acts by agents acting for customers.

For example, take the principle “maintain records of trading.” Under that principle, the regulator would list records that must be kept, but the principle itself would be a regulation as well. That way, as the market evolves, if some new trading record evolves that was unforeseen when the records to be maintained were detailed, the regulator could still cite a broker for not keeping the new record, based on the principle, even though it was never mentioned in one of the detailed rules. It is like saying to an employee, “To work here, you must be honest.” With that principle in hand, the employers may also list specific dishonest things that must not be done, but does not have to foresee all possible dishonest things because the principle takes precedence.

While the regulatory frameworks of other commodity futures exchanges will provide useful examples, and should be studied, it will be necessary to tailor the regulatory structure to the Egypt environment. This customization will depend, in large part, on the nature of the underlying legal basis for the operation of the commodity futures exchange. The customization process should take special care to consider problems that may have peculiar manifestations in Egypt. Areas to cover in the Egypt specific regulations include:

- Manipulation, fraud, fictitious transactions, or other abuses can harm the hedging and price discovery function of the market. Their manifestations can have cultural or local manifestations that require customized approaches for control or avoidance.
- Financial or market disruption can cause substantial losses and can adversely affect pricing and revenues in the real sector thereby undermining beneficial effects. To the extent that local conditions can be identified that provoke or permit such disruptions, regulations should be developed to help avoid them.
- Market/participant confidence and liquidity are products of certainty that the rules of the game are fair and equitable and will not be changed midstream or applied differentially. There may be local issues related to how such confidence is maintained.
- Ability to identify proper agents and to remove them if they misbehave promotes market credibility.
- A proper framework signals that the market intends to meet international standards and that an appropriate oversight regime is in place. While customization is necessary, it should be accomplished with international standards in mind. Where customized solutions conflict with international standards, the international standards should be given preference.

The prices in the market result from the private sector players playing the game of trading. Earlier the example was used of a soccer game. The regulatory and oversight functions of the government are to ensure that the playing field is properly marked, that the rule book is up-to-date and everyone is aware of its contents, and that the competent, unbiased referees are there to watch and make sure the playing of the game conforms to the rules and stays within the marked bounds of the field. Just so, the government is responsible for making sure the appropriate laws and regulations are in place, that they are widely known, and that it gathers the appropriate information (oversight) to evaluate that the traders, broker, market, and support businesses are functioning within the boundaries that have been set.

There are occasions when governments have successfully altered the market performance to better match national policy. One way this has been done is to act when the price drops below a politically acceptable level. Prices fall when there are too few buyers in the market, or the volume that buyers wish to purchase, is not sufficient to absorb the supply. The government may enter the market as a buyer and thereby absorb the excess volume, causing the price to rise. By storing that product and re-introducing it into the market when prices rise, the price can similarly be moderated on the high side. As easy as it sounds, it almost always becomes more complicated in execution. The government can effectively corner the market. This can have negative consequences, just as it does if a private business corners the market. Rather than thinking of this as a strategy, it would be wiser to recognize that the unfavorable market condition is the result of factors that likely have other solutions. For instance, it would be useful to ask why there is over supply. In today's world, where the trading community can be a world wide community, the condition of over supply is less likely, unless there are infrastructure or policy conditions that are blocking access by buyers or blocking the flow to product to potential buyers. It is much healthier for governments to attack those underlying problems directly than by trying to resolve the situation by directly tinkering with the market.

The first consideration of a government regarding regulation is: what entity should be the regulator? What will its line of authority be, through which ministry? Egypt already has a regulatory structure for the securities market with the CMA. It is common practice that the regulatory body of securities and futures markets is the same entity, but with separate divisions. The work of regulating both kinds of markets is sufficiently similar to support the argument that they the work can be done within one regulating body. However, the markets are sufficiently different that specialization is desirable. Therefore, if the same regulatory body is employed, it would be advisable for there to be separate arms that specialize in each market. Serious consideration should be given to having the CMA be the regulatory body for a commodity futures exchange.

Whether the regulator is a division of an existing body or a separate organization, it is important to ensure the regulator is insulated from political pressure, that it has an agile structure and clean lines of authority and responsibility. One of the best ways to ensure the professional integrity of the regulatory agency is to make the employment process of staff positions a strictly professional, technical process, independent from political appointment. The establishment of the agency could include the definition of a hiring committee comprised of individuals qualified to judge professional competence but who are outside the political process.

In planning for regulations, there are specific areas that need to be considered. These include:

- Standards for approving a proposal for establishing a market. It should be possible, at any time, for an interested party to propose to establish a futures market and the regulator should have the power to review and approve or deny the request for authorization to establish a market. It may be that at the outset the government issues an invitation for proposals for establishing a market. That should not be a restrictive event. Proposals should be accepted at any time in the future that any group wishes to present one for consideration. Setting a date for inviting proposals is essentially a way of the regulator stating that starting that date; they are ready to start doing the job of regulating. The process of proposing, reviewing, and authorizing the establishment of an exchange should be a technical process, not a political process.
- Examining broker qualifications. The regulatory agency should be responsible for establishing an examination, or rather a set of several exams. It should not be responsible for the education process whereby a potential broker gains sufficient competence to pass the exam. The grading of examinations should be a blind process whereby the exam cannot be linked to the person who took it, until the score is determined. The process should be automated and rapid. Ideally the examination could be computerized and the person being examined could know immediately at the end of the exam if he/she had passed, and a license issued at the same time if the person passed. If a person does not pass, there should be a time period set, of perhaps several months, during which the person cannot re-take the exam. When the examination is to be administered, the computer would randomly select from among the available exam versions the one to be administered. The purpose behind all this care is to make sure of two things. First, brokers are properly qualified. Second, the process of determining the issuance of licenses is strictly technical.
- Qualifications for being a broker related to the financial qualifications, the personal history of being an upright citizen, language qualifications, and so forth.

- Performance objectives and criteria for measuring operational integrity. It is very important with regard to the measuring issue that the regulator always ask the question “For what?” when defining the measurements that it requires the market to report. It is easy for eager regulators to create a data generation burden that exceeds the regulatory needs. A sound approach to avoiding this error is to start from the standpoint of the reports that the regulators determine would advise them of the characteristics of the functioning of the market and allow them to make their determination of compliance. With those blank reports in hand, they then work backwards to determine what data, from whom, with what processing, will be necessary to fill the report.
- Set, monitor, and enforce trading rules. In many instances, the setting of rules will actually be a process of the market proposing the rules and the regulator accepting them and giving them the weight of approval.
- Just as the regulator will require that traders be open with them about information, the regulator, in turn, should be open about sharing statistics regarding market activity, as long as the release of information does not penetrate the corporate veil of any business.
- Contracts approval, by judging them against a fixed set of technical criteria. A contract is, of course, not an individual contract between an individual buyer and seller; rather it is the contract format that will be used for a specific commodity for all transactions.
- Rules to handle emergencies. As before, this may actually be an approval process of rules proposed by the market. It should include things such as the maximum daily price fluctuation.
- Systems for continual disclosure of appropriate information and have open auditable records of the processes it monitors.
- Rules for ensuring the financial integrity of customer funds.
- Transparent and efficient systems for dispute resolution.
- Monitor the governance fitness of the market authorities and processes.
- The regulator should prepare reports for the government and advise the government regarding market performance and risk related issues.

The efficient operation of the market requires that the regulator allow, or require, that the market itself to be the first line of regulation and rule enforcement. Elements that the regulator may delegate to the market might include the following:

- Authorize the market to be the first tier of market regulation, including sanctions for non-performance.
- Authorize the market to propose the rules and bylaws of the market.
- The market should generate the contract drafts setting the terms and conditions of the contract in full detail for regulatory consideration and authorization.
- Allow the market to propose the settlement process and to establish a settlement guarantee fund and the rules for its employment.
- Allow the market to propose the first level of dispute resolution, including enforcement and disciplinary measures, as well as implement the same procedures once they are approved.
- Allow the market to propose definitions of manipulation and criteria for detecting systems for preventing or correcting manipulation in the market. The regulator should require that the market execute those systems and guarantee financial integrity in the trading processes.

- The regulator should set policies for disclosure by the market of rules, contract terms and conditions, processes, and performance.

The following figure is an elementary demonstration to show how the regulatory structure integrates with the market structure. The colored cells show where regulation participates in the market structure.

Product *Contract Right*	*Platform* *Multilateral*	*Participant* *Anonymous but Access and Fitness Criteria*	*Credit Enhancement* *Credit substitution*
Legally tradable interest— Appropriate price reference	Reliable transparent pricing mechanism	Proprietary Market maker	CCP clearing offset
Certainty of enforcement of terms and conditions that replicate cash market conventions	Pre-specified, enforced rules	Intermediary	Margin—initial, variation, super
Not readily susceptible to manipulation	Electronic-Algorithm	Customer commercial speculator professional retail	Other financial resources Risk management
Reliable delivery and settlement mechanism; expiration convergence of cash and futures	Maintenance of fair and equitable trading	Appropriate conduct of business rules; Customer segregation	Maintenance of financial integrity

As critical as the regulatory process is, the regulatory body must constantly evaluate its systems and requirements to make sure it is not unnecessarily impeding the trading process. An active and open dialogue with the market, brokers, and traders is essential. Collaboration with similar regulators in other countries and with IOSCO resources is also important. The primary responsibility of the regulator is to assure market integrity, but it must do so which allowing the maximum flexibility in the market so that the country receives the maximum potential of having a market.

Appropriate regulation leads to a virtuous cycle. It builds confidence, which attracts liquidity, which supports greater certainty and predictability in the market, which builds confidence, and thus the cycle builds on itself.

D. Clearing

Futures are the contract rights to take delivery of a specified quantity and amount of commodity, secured by posting a small performance bond often referred to as margin—hence a small bond secures the obligation to pay gains and losses on a much larger amount. Either during or at the end of the trading session, the process of clearing takes place. It involves an accounting that debits or credits accounts according to the price movements of the positions being held. The amount that is maintained in the account,

after this process of clearing must be a value equal to or greater than the minimum amounts defined by the market rules. Thus:

- Clearing is critical to the operation of futures markets to assure that credit risk is minimized and market risk is appropriately collateralized against potential non-performance by a market participant.
- Clearing arrangements usually use a central counterparty that removes credit risk by collection and payment of variation margin (the losses/profits) daily or more frequently and also relies on guarantee deposits and other resources or a common bond.
- The legal and regulatory system must support the flawless operation of these arrangements as they are the basis on which anonymous counterparties are willing to transact from remote locations.

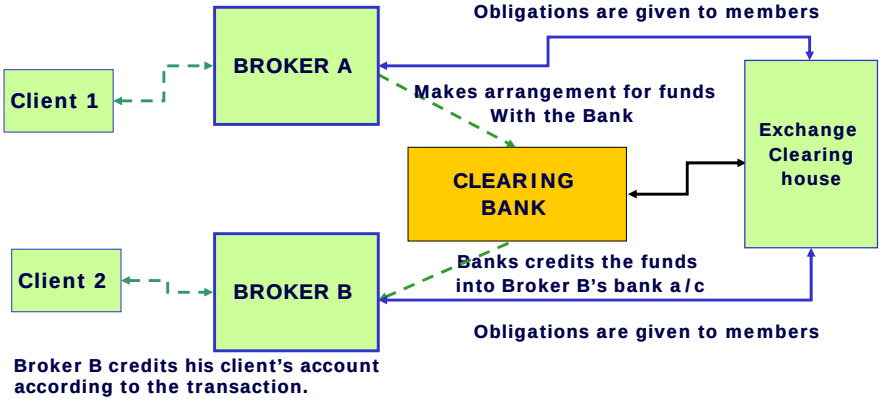
The market has brokers who are authorized to trade. The process of clearing applies to crediting and debiting the accounts of the brokers according to the demands of the market. Brokers, in turn, commonly have clients on whose behalf the broker trades in the commodity futures exchange. The broker is responsible for accomplishing the clearing of accounts among his clients. Because the broker is required to maintain certain standards, the regulatory process should penetrate the corporate veil of the broker to assure that the clearing among the broker's clients is accomplished with the same integrity as required in the market itself.

What makes the clearing process so critical for commodity futures exchanges is because trading is so leveraged. Small price changes can have very large implications for contracts and therefore require rapid, accurate clearing with the very highest level of integrity.

E. Trade Settlement, Assaying, Insurance, and Warehousing

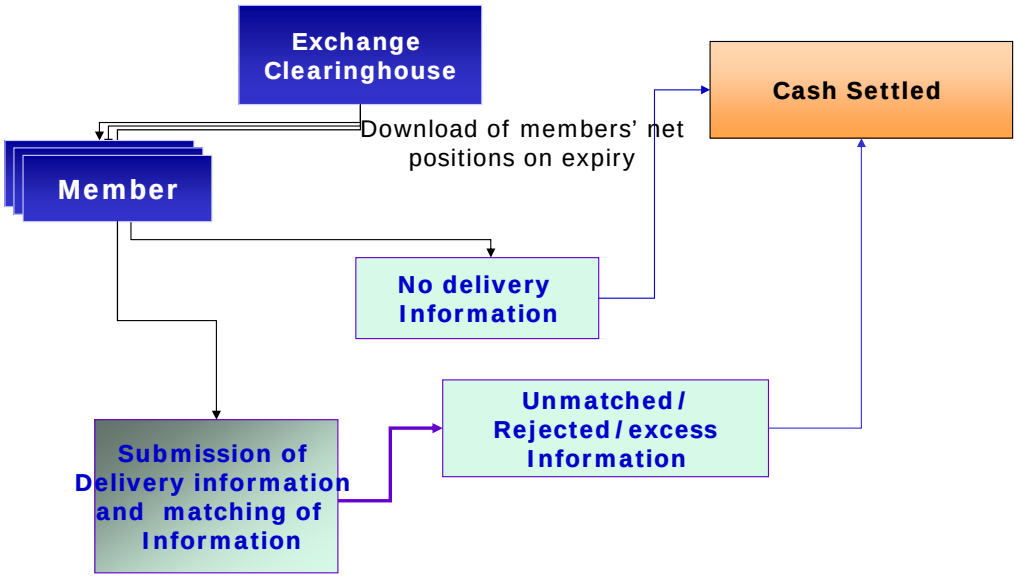
Trade settlement refers to the same basic process as clearing, but as it results from the process of trading, rather from movement in the price of the contract. It requires the same standards and integrity. In other words, when a trade is accomplished, there will typically be a net gain or loss to a trader. That amount is either credited or debited to the broker's account, which then enacts the transaction relative to the trader's account through his own back office operation. The following illustration shows the basic process:

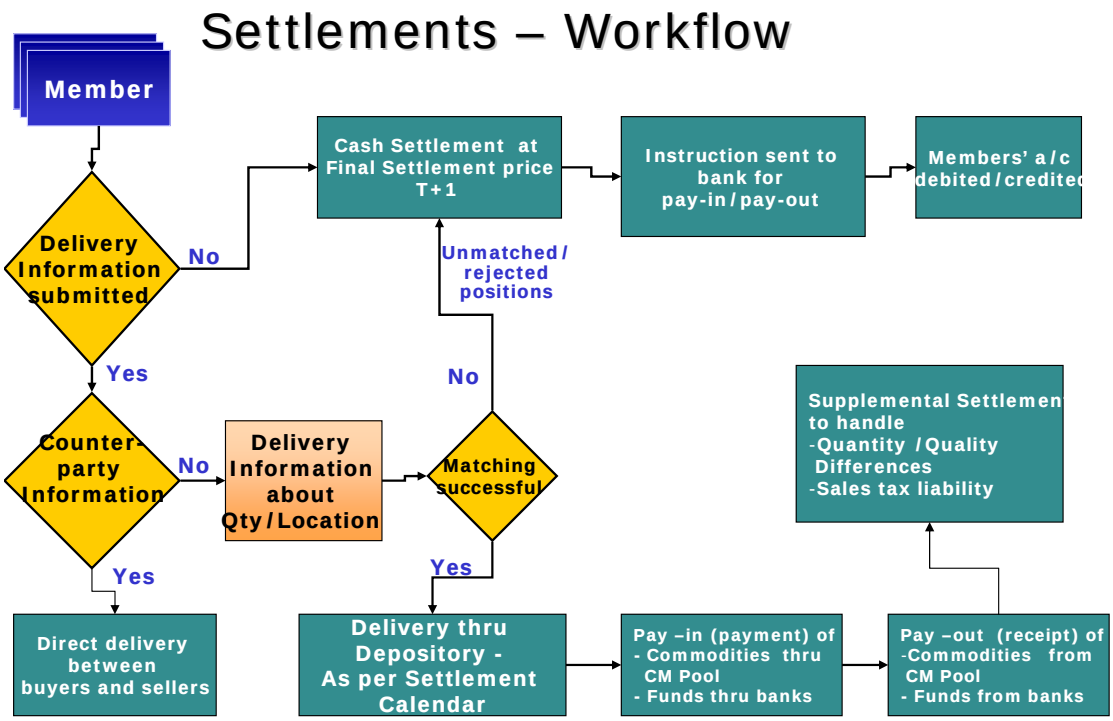
Daily MTM and Margin Settlement Process



The process of settlement has two basic potential routes. Either it describes the settlement whereby the commodity is physically delivered, or it describes the financial transaction that settles accounts between traders, and that occurs when the commodity contract is traded on the commodity futures exchange. The following illustrations show a typical flowchart of how settlement occurs:

Settlements – Cash Settlement





In the settlement process, when the settlement is a cash settlement, money is credited or debited to accounts, on a net basis. With electronic exchanges this is now typically accomplished on the same day as the trade. On a paper exchange, a rapid settlement would have been T+1 and more likely T+3. In addition to the regular settlement process, there may be supplemental settlements that account for a number of potential charges, such as:

- Differences arising on account of
  - Quality differences - premium/discounts
  - Quantity differences - shortage/excess in deliveries
  - Location differences
  - Sales tax rates
- Pay in and pay out conducted after final settlement as per Settlement Calendar
- Charges associated with amounts debited/credited to members' clearing bank account

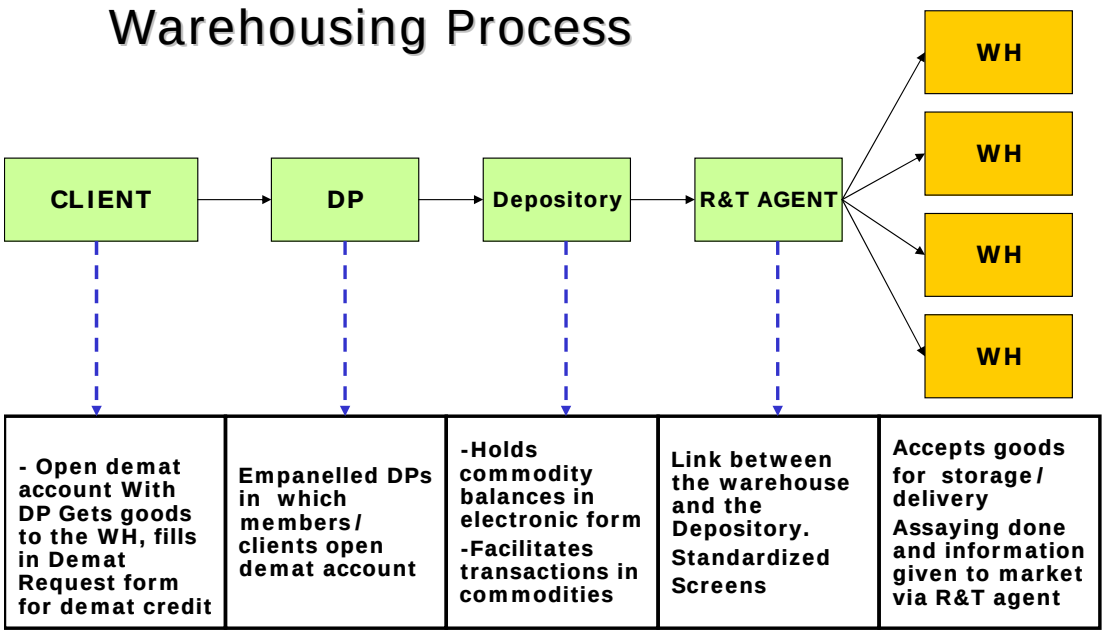
The following example shows, numerically, how the net settling is figured by account:

Settlements – Final Settlement

	Member A			Member B	
	Client 1		Client 2	Client 3	
	Contract X	Contract Y	Contract X	Contract Y	
Day 1	400 S	700 B	400 S	200 B	500 S
Day 2	-	400 S	400 B	200 B	
Date of Expiry	400 S	300 B	-	400 B	500 S
Open Position	Contract X 400 S Contract Y 300 B			Contract Y 500S – 400B = 100 S	

Commodity futures exchanges have an underlying basis in some commodity. At some point, the producer of the commodity must deliver the commodity. Typically, a system is established so that, instead of driving a truck up to the doorstep of the one who held the contract when the delivery date arrives, the producer delivers the product to a specified warehouse, silo, or other authorized receiver.

The following illustration shows a typical set of operations associated with the functioning of a warehouse system:



The system of warehousing must be customized by commodity. Some commodities, like wheat, are fungible. That means that if I expect to receive wheat, the volume and quality characteristics guaranteed in the contract are what matters. It does not matter that I receive the specific grains grown by the producer that originally agreed to deliver this commodity. Therefore, a warehouse system can be designed to allow for the most efficient storage and delivery taking into account if the product is fungible or not.

The warehousing system must be designed with systems and controls which can be monitored and that can be legally certified. They will protect against unlawful exchanges or tampering and will be able to document the chain of protection.

Closely linked to and associated with warehousing is the system of assaying. The contract will specify that the commodity must have certain quality and condition characteristics (for agricultural commodities, quality typically refers to the aspects of the product when it was harvested, whereas condition more commonly refers to what has happened to it since harvest). Someone has to inspect the product and certify that it does or does not meet the required standards. That someone is the assayer. This must be a person who is trained, impartial, expert, and consistent in his/her judgment. It may also be that this is a person who is bonded against claims of inappropriately certifying a product.

Insurance is another element in the commodity futures exchange business chain that must be included in the design of the markets. It is not a service of the market, but it is a necessary ancillary service important for allowing markets to function. Insurance is important because it permits agility. Insurance basically allows different aspects of the business chain to reach a reasonable level of surety that things are normal or acceptable and the business can proceed as normal. Without the assurance of bonding or insurance,

levels of risk for different components of the business process would be unacceptable. For instance, if there were no insurance, the final receiver of product could not possibly accept the determination of an assayer, but would have to personally inspect the product, the entire product, to make sure it fully complied. This would raise costs, take time, and induce friction in the system.

Warehousing, assaying, clearing, and insurance are important aspects of a well functioning commodity futures exchange, but they are not directly a part of the business that is the exchange. In general, in the overall design of a market, consideration must be given to:

- Encouraging private parties to build quality warehouse systems.
- The exchange should accredit the warehouse as the delivery location for the specific commodity.
- Establish agreements with the warehouse, depository, and R&T agent.
- The exchange should supervise the functioning of the warehouses.
- The seller intending to deliver will book and reserve the space directly with the warehouse
- Indicative warehouse charges should be published and available to trading parties in advance.
- The warehouse should directly collect its charges from the depositor till the commodity is dematerialized.
- Once the commodity is dematerialized the charges should be collected by the depository participant.
- The warehouse should accept commodity only on certification by the exchange recognized assayer.
- The warehouse must be financially and legally responsible for the quality and storage of commodities at the warehouse.

It may be possible to establish a one-stop shop for several of these ancillary support functions for the market. This can create efficiencies in the overall business process associated with a commodity futures exchange. It simplifies the process and reduces barriers for potential market participants. The following figure illustrates what might be possible:

One-stop shop bundling of services

Unit	Function
Warehouse	Hub of activities
Banking	Franchised branches Low cost ATMs, Agri-loans, financing, aggregation
Crop Insurance	Franchised branches, Crop risk mitigation, weather stations
Life Insurance	Life risk mitigation
Exchange (Price & Trading)	Price risk mitigation & real time knowledge
Grading Agencies	Scientific grading, quality migration
Input suppliers (seed, fertilizers & machine tools)	Increase availability to farmers
Agri-extension services	Facilitate other needs & services

Commodity futures exchanges, historically, ran on paper. The transactions were recorded and tracked with a series of slips of paper and ledgers. That same benefit can be achieved in the warehouse process by dematerializing the commodity to be an electronic record that is managed independently from the physical management of the commodity or the physical management of paper that represents the product. The benefits of using an electronic warehouse receipt include:

- The efficacy of physical settlement process is crucial for success of exchange. The integrity of the process is greater by using electronic warehouse receipts.
- A paper based warehouse receipt may lead to delays or loss in the transmission process.
- The possible threat of counterfeit receipts is reduced relative to the risk of using a paper based system.
- In an electronic system, a real time check of genuineness and stock verification is possible.
- An electronic system is friendlier for tracking the exact status of a transaction and of avoiding confusion.
- The electronic transfer of ownership through electronic receipts significantly reduces settlement time.

F. Commodities Eligibility and Contracts

The first criteria for commodity eligibility to be traded in a commodity futures exchange is that it be nonperishable. Perishable commodities are a world unto themselves. The market chain must operate so rapidly that they are often traded without formal contracts and guarantees as would be considered normal to other businesses. The only perishable commodities that could be considered for trade are those that have been transformed in some way, such as freezing, so that the issue of their perish ability is mitigated.

In the process of evaluating proposals for starting a commodity futures exchange, the consideration of the products being proposed should largely be ignored by the government. It should allow the market to make that determination. The rare exception would be the possible trading in a commodity that could create international scandal or provoke national security concerns. For instance, a government should not approve a market for the trade of plutonium. Of course this metal would fail on a number of other criteria such as volume and the number of potential traders, but it illustrates the point that the disallowance of a proposal because of national interests related to the commodity proposed should be a rare event.

In Egypt, there are commodities, such as wheat, that are considered of very high political and social importance related to food security. They can be of concern because Egypt is a net importer and would like to be self sufficient. That should not be justification for denying wheat as a commodity that might be traded. The better the market functions, the more likely those Egyptian producers will find sufficient incentive to produce more or that the options for obtaining the needed volumes of the product internationally are improved. For every commodity proposed, there will be voices in the government that have concerns and voices from the private sector that wish to protect private interests. In general, those voices should not be appeased, unless the concerns they express rival those of plutonium as an issue of national security and international sensitivity.

The topic of which commodities are the most likely to be traded in Egypt was covered earlier. Basically, in designing a commodity futures exchange this is a topic that should occupy little attention on the part of the government. Those who wish to apply for a license to open an exchange will propose the commodities of their interest. Rather than being hypothetical, their proposal will carry the weight of their commitment to put up money to make the trading of that commodity viable. There will not be any surprises as to the commodities proposed. There are only a hundred or so agricultural commodities traded in futures markets world wide. The commodities that will be proposed will be those that are the most important non-perishable commodities in the economy.

If the government wishes to encourage the trading of specific commodities that are not proposed, it should think of incentives, such as related to the tax system that would heighten private sector interest. It should not consider obligating a market to trade a specific commodity.

Selected commodities are traded based on a specific contract provided by the market. Those contracts have to be designed and approved. The private sector should design them. The regulating body should approve them. The approval process should be linked to technical criteria that assure market integrity.

Something in the order of 80 percent of all contracts can fail. Failure means that something about the contract or the commodity was unacceptable or uninteresting to potential traders. Failure means the contract does not trade with sufficient volume and liquidity to sustain a market. It means there should be an examination to determine if there are changes that would make a new contract attractive.

The process of writing a contract should start with a template. Studying the successful contracts of other markets will be useful. The market should conduct rigorous product research. This should include a study of the entire value chain to make sure there are no issues that could impede the trade. The specifications of the product have to be

developed. These may be benchmarked against similar commodities or against contracts in other markets. There must be common, and perhaps legal, grades and standards specified. These should be as objective as possible, such as size criteria, color, and form. There could be contract specifications that recognize origin of the product that either allows a premium or a discount. The same is true for quality premiums or discounts. The role of the government in this process is to observe and dialogue with the private sector. Once the contract is submitted for approval, the consideration of the regulator is to evaluate the quality of the contract for maintaining market integrity. It should provide appropriate protections for participants and protect against market manipulation strategies.

G. Technology

From the stand point of the government, the technology issue is to establish appropriate, parallel technologies to those of the market so as to facilitate the exchange of information and assure agile responsive regulatory processes.

For the private sector, the issue of technology is critical, and will represent a very large component of the cost of setting up a commodity futures exchange and maintaining it in the future.

The very best technologies, both hardware and software, should be employed to ensure fault tolerance and financial integrity. Unless otherwise restricted by the government, the technological design should assume a worldwide market with all that presumes in terms of managing time zones, trading hours, off hours trading, currency, language, financial transactions, access to the market, tracking supplemental information (weather, war, social disruption, international decisions affecting trade, holidays, etc.) and information dissemination. The design should take into account multiple options for accessing the market.

There should be provisions for low level technology access, either to the market or to its trading members, up to the most up to date high technology. Examples include:

- Terrestrial access
    - Traditional land line telephone access
    - Dial up ISDN
    - Internet access
    - Leased phone lines
- Wireless access
    - V-Sat (this is satellite uplink and downlink access)
    - Mobile telephones
    - WiFi

The technology employed must support a trading system where:

- Buyers and sellers are unknown
- International reach and equal access
- Order matching on price-time priority
- Time stamping for each order and trade
- Complete audit trail

- Fully fault-tolerant with high availability server system
- In-memory database for managing high order input rate

In terms of the physical location of the commodity futures exchange consideration should be given to it being physically located in a place where the very best hi-tech options, such as fiber optics, are available. Proximity to the clearing house and other ancillary businesses, though desirable, is not necessary. Locating in a physical area that allows brokers to physically locate close to the offices of the market, though desirable is not necessary. The regulatory body would be well served to be located within reasonable proximity to the physical location of the market offices. Physical support, in terms of access to good transportation facilities, airports, parking, water, waste water, fire fighting support, fire hydrants, and solid waste services, should all be taken into account. Consideration should be given to physical security, for instance, not locating in a flood plain, or near military facilities, or near known geological faults, or in areas known to have specific and recurring weather problems, and instead locating in a place where the physical security of the building can be preserved. The physical building should have all the modern facilities for dealing with the threats of fire, earthquake, unlawful entry, and so forth. Finally, with regard to technology, the commodity futures exchange should be designed so that continual backup of critical information takes place and, if necessary, the operations of the entire exchange could re-locate to a backup location with little or no interruption of service.

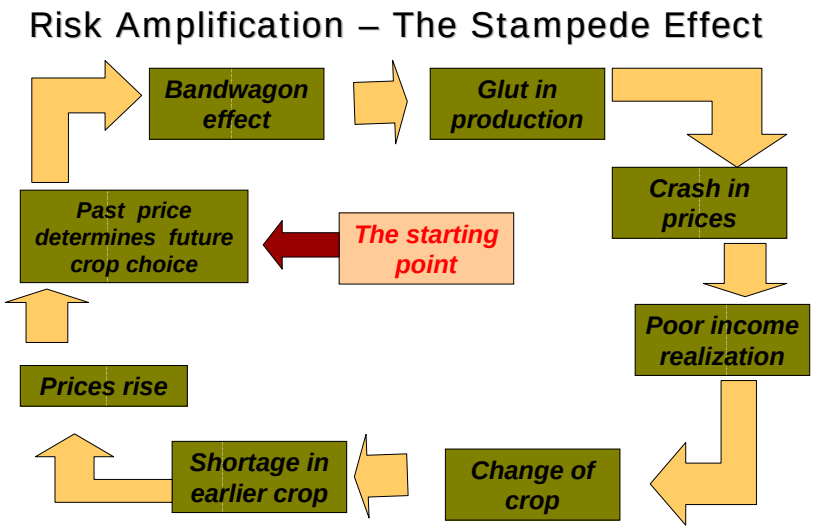
The better the technology system that is employed works, the less it will be noticed by market participants. It will be like the surface of a desk. It allows for smooth operation, but is little noticed by the person writing upon it.

As noted before, these are concerns for the private sector. The role of the regulatory body may be no more that to review that consideration has been given to these issues.

H. Risk Management

The design of a commodity futures exchange must account for many risks.

The first risk, and the reason the markets exist in the first place, is to reduce the cyclical risk that is natural to agricultural markets. In addition to the normal annual production cycles, there are sociological or economic cycles that increase risk. Individuals observe the market performance. When it is positive, they interpret that as an opportunity, without knowing the decisions being taken by other producers. Too many decide to produce for the perceived market opportunity. Over supply is the result. Again, individuals interpret the market signals as negative and do not produce. Under supply is the result. The following illustration shows how the individual decisions of producers, based on their experience in the market place, inadvertently amplifies volatility and therefore amplifies risk. Though this example relates to the production cycle, the “herd” effect can be provoked by other phenomena for other market participants.



The existence of a futures market helps to break this undesirable cycle by doing a better job of information dissemination about demand and providing opportunities to hedge against undesirable future market conditions.

There are additional risks in the operation of the market itself. Commodity futures exchanges trade on the margin. This means that the trading process is highly leveraged. It means that fortunes can be made and lost very quickly. As a result, in the design of the market, there must be careful and through planning regarding the size and management of margins. Rules for trading on the market will filter down through brokers to the accounts of their clients. The margins must be set high enough to reduce the risk of a broker or trader exceeding his financial capacity to cover margin calls. They must not be set so high that they discourage trading and reduce the liquidity of the market.

The advent of electronic trading has greatly facilitated the management of risk because it reduces the time between action in the market, either in terms of price movements or the execution of market orders and the time at which they are cleared and settled.

The market design should set specifications regarding the maximum order size, and the size of the position one trader can have in the market. In both cases, the limits are intended to avoid financially capable traders from controlling the market because of their financial power. It also serves to keep irresponsible or overly optimistic traders from seeking positions that are beyond their financial capacity.

Markets themselves can be subject to a herd mentality, similar to the one described above, among agricultural producers. Rapid movements in the market can spark panic or greed to cause many traders to enter the market with the same intent, to either buy or sell. This can lead to a self fulfilling prophesy that the market begins to climb or fall uncontrollably. The phenomenon can cause a trader to feel he must act because everyone else is acting. The design of the market should include limits on how much prices are allowed to move within a defined time period. If those limits are hit, trading is

halted. This gives the market time to regain its sensibilities and consider the information available before trading is re-initiated.

The regulating body should determine the value of a Settlement Guarantee Fund that is to be maintained by the market. This fund is used to cover contingencies that would otherwise delay or deny legitimate payments to traders in the process of clearing a settlement. It is a fund designed to ensure market confidence that transactions are sure.

An investor guarantee fund is typically provided for either in legislation related to the authorization of a commodity futures exchange or in the enabling regulations. It is a fund that functions essentially like an insurance policy for investors in the event of worst case collapses of markets or failure of brokers.

I. Dispute Management

As noted in the section on regulations, a good dispute management system will be essential to the good functioning of markets in Egypt. A multi-tiered system should be considered. The first layer should allow for a dispute resolution system administered by the market itself. It should be the instance that handles the major if disputes. The market should have the ability to enforce its determinations in terms of its ability to credit or debit accounts in accordance with its determinations regarding disputes. It should also have the ability to restrict trade based on its determinations. These mechanisms should be built into the operating procedures of the market and agreed to by traders at the time they are given permission to trade. The provisions of this system should also include those conditions for where appeal is possible.

Appeal of determinations made at market level dispute resolution should move to a system of dispute resolution at the level of the regulator. As before, the regulator should have the power to instruct the market as to the actions to take as a result of its determination.

Between these two, the great majority of disputes should be resolved. Of course if the parties involved are not satisfied with the resolution, they should have the right to seek recourse in the normal court system. However, the determinations of the resolution process in the market and with the regulator should count as evidence and carry significant weight in the courts and probably only be overturned in the event that fraud or other criminal intent is detected as having interfered with the dispute resolution process at the market and with the regulator. The authorization of this sort of dispute resolution authority should specifically be provided for and authorized in the law.

J. Surveillance

The section on regulations contains additional discussion regarding surveillance.

Surveillance is a continual process. It is required between the broker and his clients. It is required by the market over its brokers. It is required over the ancillary services (clearing, settlement, warehousing).

Surveillance from the standpoint of the regulator involves monitoring processes of the market and investigating the market behavior of participants. It includes monitoring of prices. The intent is to detect disturbances in prices that are caused by actions or forces other than those of normal market activity. It involves watching the spread, the inter-day, and the intra-day volatility of prices. It involves monitoring the pattern of trades by particular traders, in terms of the volumes relationships to trading by other traders. There should be staff dedicated in the regulatory body to analysis of trading patters, who are educated in the kinds of information that accompany aberrations in free and fair trading.

The monitoring is not only for detecting unauthorized activities. At the level of the market, it can also serve the function of detecting legal but unsupportable trading actions by a specific trader.

The monitoring process should also include tracking the actual availability of product to underpin the trading process.

K. Additional Considerations

- The Strength of the Cash Market

Mention has been made of the importance of the underlying cash market. The work associated with producing this report resulted in the observation that there are weaknesses in the cash, or spot market in Egypt, that, if addressed, could greatly strengthen the agricultural sector.

Egyptian agriculture can be divided into perishable and non-perishable commodities. Only non-perishable commodities will be traded on a commodity futures exchange, and only a few of those will be traded. One of the expectations of the GOE of Egypt is that a commodity futures exchange will benefit farmers. While that is true, it is also true that improving the underlying cash market will greatly benefit the entire agricultural sector, including all of the perishable commodities and all of the non-perishable commodities. It will also provide a more solid base upon which a commodity futures exchange will operate.

Fortunately there are two actions that can be taken that have low cost and high benefit.

The first one is to implement a system for gathering, processing, and disseminating daily wholesale market prices. This dissemination should be nationwide. It should include as many media as possible, but the backbone of the system should be dissemination by radio. It is likely that almost all rural households have access to a radio and that they listen to it every day. Price dissemination should happen at the same time every day. The system should be designed to ensure that the system has three basic qualities:

1. The price information should be of high quality. Those who use the prices should have confidence that they are a good representation of prices in the markets.
2. The price information should be provided in a consistent fashion.
3. The information should be as fresh as possible. Basically, today's prices should be disseminated today.

This information should be gathered from all of the major wholesale markets in the country. The greatest value this price information has is on the day it is gathered. The

older it is, the less valuable it is. Nevertheless, the system should also provide access to historical information.

This kind of information is very helpful for commodity futures exchanges because it provides a basis of analysis by the various traders and facilitates a price discovery process in the market that is less likely to deviate from the reality of the underlying commodity spot markets.

The second thing that can be done is establish more spot exchanges. These are organized markets. Instead of single traders meeting with single producers and negotiating a price, exchanges or auctions allow for multiple buyers and sellers to come together and compete for product. This allows the market to determine prices more efficiently and that are more realistic.

At the present time, based on cursory observation, there is a great deal of “leakage” or inefficiency in the cash markets. One of the common complaints heard in the preparation of this report is that intermediaries are the ones that make all the profit. The comment is typically made with the intent of implying that the farmer is being abused and not receiving his fair share. Without commenting on whether or not that is true, in general, systems where intermediaries are capturing disproportionately large percentages of the economic flow are marketing systems that are functioning badly. It is not that the intermediaries are bad people, it typically means they marketing process results in them taking large risks. It may be that in order to do business they have to offer credit, perhaps both to the producer and those who buy from them. It may be that the post harvest technologies, transport technologies, packaging systems, all induce high levels of product damage or loss before reaching the consumer. These are costs that have to be absorbed by the percentage of the price the intermediary is capturing. Basically, instead of being a situation of exploitation, it is way of the market expressing that it is sick, and that it is not functioning well. There is no reason to think that the business of intermediary in Egypt has somehow been populated by unscrupulous scoundrels. There is reason to suspect that the inequities that exist are there because the marketing portion of the commodity chain is not working as well as it could and should.

It is also the case that people are in business to make money. Any business that finds a way to gain an advantage in the market can improve its profit margin. One way that this can happen is that the intermediaries have better price information than other players in the market.

The suggested actions will not cost the GOE a great deal, but if they are undertaken aggressively and committed to for the long term, they will induce efficiency in the markets. World wide, experience shows that the farmer will increase his income. Volumes will increase. The quality of the product will improve. The packaging and product management systems will improve. And, the price to the consumer will be lower.

So, these actions, in addition to providing a better cash market basis to support a commodity futures exchange, they will provide a much wider benefit to the agricultural sector and the economy of Egypt in general.

History shows that the most effective way to improve the lot of poor farmers is not to try and “fix it” for them. Those efforts are often not sustainable. The better way is to give farmers and markets the tools or facilitate the conditions so that the market fixes the basic

problems of inefficiency and inferior performance. Providing wholesale market prices to the agricultural sector, on a daily basis, is a very powerful and low cost way to help the agricultural sector improve itself.

By way of estimate, a nationwide price collection and dissemination system could be established and operated for an annual cost of between $300,000 and $400,000.

- **Commodity Spot Market and Futures Exchange**

As long as there have been humans, there have been spot markets. On the other hand, commodity futures markets are a very recent phenomenon. They evolved as a complement to spot markets. Spot markets and commodities futures markets, when they operate as they should, make each other work better.

When they originated, commodities futures exchanges were operated by the same people who did business in the spot markets, and because of that, the two markets were physically close together. The recent technological advancements in four areas have made it so that physical proximity is no longer a requirement. The first is the advances in transportation. The second is advances in the sophistication of financial systems. The third, which is closely related to the second, is the sophistication, efficiency, and confidence in the flow of information. The fourth is the effect of globalization which has made the ability to do business across country borders easier. The combination of these factors has de-linked spot markets from commodity futures markets in terms of physical proximity.

It is now possible for a country to have an agricultural commodities futures exchange for a product it does not even produce. For instance, one of the more important futures markets for coffee is in New York City. There is no coffee produced in that city, in that state, or in the continental United States.

Originally, for agricultural commodities, spot markets and commodities futures markets were essentially located in the same place. Think what would be the constraints to moving the commodities futures exchange, across the street. What would be the constraints to moving it across town? How about moving it to the next city? What about moving it to the next country? In each case, as long as there is an economically feasible solution to the constraints noted above (transportation, information communication, the ability to move money, and the lack of border constraints – including issues of trust and transparency), the commodities futures exchange can be moved to wherever makes sense to the traders. Countries that provide an economically attractive environment and provide an efficient, transparent, trustworthy setting can attract the establishment of commodities futures exchanges, even for products that they do not produce.

For agricultural products, the increasing latitude of where to locate a commodities futures exchange does not eliminate the reality that there has to be a spot market somewhere. Furthermore, the spot market must function as a market, without undue constraints or interference. An agricultural commodities futures market will only function well if there is a smooth running, transparent spot market somewhere.

Consider a perverse example. Suppose a country has a spot market in some commodity, but that the market is subject to price controls, official interference in the movement of

goods, high artificial transaction costs, and so forth. Suppose that same country establishes a commodity futures exchange for that same commodity and does a good job of establishing the legal and regulatory environment. Suppose the commodities futures market is allowed to function transparently and efficiently. Suppose there is a smooth running, low cost, efficient system of dispute resolution. Under these conditions, the commodity futures market could function very well for that product, but it will trade products from other countries, not the product grown at home. At the very best the local production will be a minor component of the market. The constraints on the spot market will be artificial barriers for the local product to trade effectively and economically in the spot market. As the constraints on the spot market are resolved, then the local product will trade as an increasingly important component of the overall futures market. The futures exchange, in turn, will work better as a result of the increased volume of economically attractive local product.

An agricultural commodities futures exchange can exist in a country without the corresponding spot market, or markets, being located in that country. However, if a spot market does exist in that country, then an efficient and effective spot market will make the commodities futures exchange function better and the country will experience the multiplied power of the two markets interacting to provide the greatest efficiency and profitability to the nation's farmers, traders, and businessmen.

In the case of Egypt, as work moves forward to establish a commodities futures exchange, the future likelihood of success will be improved if, in parallel, efforts are made to improve the spot, or wholesale markets of the country. There are many things that can and should be done. Any issues that interfere with prices being determined exclusively by the market, that inhibit access to the markets, that increase transaction costs artificially, that keep the farmer from being fully exposed to the market price realities, or that otherwise interfere with free market forces should be reduced as much as possible. As noted in the report, perhaps the most cost effective improvement (biggest bang for the buck) for Egypt would be to institute a system of collecting and disseminating wholesale prices for agricultural commodities, on a daily basis, nationwide. High quality, timely price information, provided consistently, is a necessary condition for wholesale markets to work well. For the average Egyptian farmer, these prices should reflect the reality of the different wholesale markets in Egypt. For the whole industry, prices from the export markets should also be available. Improvements in the spot markets, even for products that are not traded on the commodities futures exchange, will improve the overall agricultural market environment and improve the likelihood of success for the commodities futures exchange.

In summary, a well running spot market has to exist in order for a commodities futures exchange to exist. Modern improvements in transportation, communication, financial systems, and international trade make it possible for an agricultural commodities futures exchange to be located in a country different from the location of the agricultural wholesale markets. If that well running spot market is in the same country as the commodities futures exchange, then the national economy of that country is more than doubly benefited as the market synergy will create a multiplied benefit. If the commodities futures exchange is based heavily on spot markets that exist in other countries, then there will be fewer national benefits from having the futures market. For Egypt, the best course is to actively work to improve its spot markets at the same time it is establishing the framework for a commodities futures exchange.

Annex A: Definitions

The following are some key terms that are used in futures markets that are useful to define so that there is a common understanding in reading this report.

Appreciation
An increase in value. As simple as this term is, it can be a point of confusion, particularly in financial markets. For instance, think of when a currency appreciates in value against the dollar. Quotes for that currency against the dollar will go down. But for contracts quoted in dollars against that currency, the price will go up. Of course, “depreciate” is just the opposite.

Arbitrage
The practice of buying and selling contracts in different markets in order to profit from differences in prices between the markets.

Arbitration
The process of settling disputes.

Ask
The offer price of a seller or the price at which he is willing to sell.

At-the-Market
An order that accepts the best price obtainable at the time the order is received.

Balance of Payments
A balance sheet or accounting record that shows the value of all the transactions among all of the parties.

Basis
The difference between the spot market price and the futures market price.

Bear
Someone who believes the prices will move lower. A bear market is a time period in the market when the prices are declining.

Bid
The price at which a buyer is willing to make a purchase. It is the opposite of the “asking price” or “offer.”

Break
A sharp decline in the market.

Broker
A firm (brokerage) or a person that executes the trades. A brokerage is also known as a “commission house.” Its income results from the commissions it charges customers for executing trades.

Bull
Someone who believes the prices will rise. A bull market is a time period in the market when the prices are rising.

Call
An option to buy (go long) at a preset price, within a given time period.

Carrying Charges
The sum of the charges associated with holding a commodity, including storage, insurance, interest (opportunity cost) that would have been earned if funds equaling the value of the commodity had been invested, and other incidentals.

Cash Commodity
The actual commodity being traded, such as bushels of wheat or bales of cotton.

Cash Market
A market in which the product is delivered and the cash is paid at the same time. It is sometimes called a “spot” market.

Cash Settlement
Futures contracts that are settled in cash, at the current price in the market, at some point before the actual delivery of the product is required. Two speculators who buy and sell a contract, make cash settlement without any product actually changing hands.

Clear
A clearinghouse maintains records of all the transactions for its members and, at the end of the trading day, calculates the net gain or loss for each account based on the trades of the day.

Clearing Member
A member of a clearinghouse. This may be an individual, but is more likely to be a brokerage. Each member is required to maintain a minimum value or equity in its account. All market transactions must be done through a member. At the end of the day, when the clearing house clears, the account for a member includes all of the purchases and sales it conducted for all of its clients, throughout the day, and his account is debited or credited according to the net of all the transactions. The member, in turn, does the same for each of its clients, adding in the fees it has agreed to charge.

Clearinghouse
The clearinghouse is not necessarily the exchange itself, but it is the entity that does the accounting of all the trades transacted on the exchange.

The Close
At the end of each trading session, when the closing price range is determined. It is also called the “closing price.”

Commission
The fee that a broker charges to a customer for carrying out any transaction.

Commodity Futures Trading Commission (CFTC)
This is a regulatory body in the United States. It regulates all futures and options trading in the U.S. The chairperson, vice-chairperson, and three members are all appointed by the President of the United States.

Contango

This is the name used for the price situation in which the futures prices become increasingly higher as the length of the maturity grows longer. The increase is a reflection of the higher carrying costs (storage, insurance, financing). However, it can give the mistaken impression to unseasoned traders that the price is raising the future, when in fact it is not. This can cause such speculators to take a long position based on a faulty assumption.

Contingency Order
Rather than having to watch the market for the conditions that would cause a speculator to buy or sell, he/she can specify market conditions that trigger the broker to buy or sell on his/her behalf.

Contract
The contract is the unit that is traded. The contract is defined by the exchange. For instance, a contract for corn is 5,000 bushels. Typically, a contract specifies at least the volume, the quality and the date of delivery, leaving the price open for the buyer and the seller to establish. A contract may be given a name base on the month in which delivery is due, such as the "July contract for corn."

Deficit
The condition when expenses exceed income. A speculator's account is in deficit when the trading losses exceed the money that is in the account. The speculator is responsible to pay that amount, plus the amount required as a margin for his account, if the account is to remain active.

Delivery
There are two important differences to futures trading from trading in a stock market. In a futures market, the contract has an end date. At that end date, the commodity will actually be delivered.

Dematerialize
Dematerialization is a process whereby a commodity is converted into electronic data and stored in computers. This is in lieu of moving the commodity itself or paper representing it. At the end of the process, dematerialization occurs and the commodity itself is delivered to someone.

Equity
The residual value of a speculators trading account.

Exchange
This is another name for a market. It is typically reserved to refer to those markets that bring buyers and sellers together in an organized manner that promotes better competition, price discover, and so forth. For instance, a spot market involves a buyer and a seller coming to unique agreement for the transfer of product at a price. If the market is organized into an auction, where buyers and sellers operate under a set of rules, then that is a spot exchange.

Fill
When an order to buy or sell has been executed, the order is "filled."

Flat
When a speculator has purchased contracts in the market, he/she has a "position" in the market. When all of those contracts are sold, the speculator is "flat" in the market.

Forward Market
A forward market refers to a contract for the purchase of product that will be delivered at a future date. It can also refer to the establishment of a contract to purchase a future product as a specified price, on the date of delivery of the product. These transactions are not conducted at an exchange. They are typically offered by intermediaries, such as grain elevators or collective purchasing agents, who, in turn, hedge their intermediation risk in the futures markets.

Hedging
Hedging refers to the practice of purchasing offsetting contracts so as to limit risk. Hedging is one of the primary reasons that futures markets exist, so it is important that the concept be understood. The following example will show a simple case of hedging:

- Situation: A baker buys corn every month. The current price is $6 per bushel. If corn goes above $10 per bushel, he has no profit. He has high risk from fluctuations in the corn market. He knows he will have to buy corn in ten months and he thinks the cash price in ten months may be too high for him to be profitable.
- He buys a corn futures contract for ten months from now at $9 per bushel.
- The futures contract, over time, rises to $13 per bushel.
- He sells the futures contract and makes $4 per bushel. ($13 sale price minus $9 he paid).
- At ten months, he buys corn on the cash market at $13 per bushel, but his real cost per bushel is $9 ($13 minus his $4 profit).
- If the opposite had been true, that the futures contract dropped to $5, he would have lost $4 upon sale of the futures contract. But when he bought on the cash market at $5, his real cost would have been $9 per bushel ($5 plus his $4 loss).
- In both cases, the futures market has allowed him to hedge and thereby manage his risk and keep his business solvent.

In this example, there is no accounting for fees or carrying costs (the cost of storing the corn for ten months). Nevertheless, the example shows how the existence of a futures market can allow businesses to bring greater stability to their business decision environment. It also shows that if there are these price changes, it could be attractive for people who have no intention of receiving the corn to buy and sell contracts with the intent to profit from the incremental changes in price. Rather than be thought of as parasites to the system, these traders play the critical roles of moderating price movements that would otherwise be more erratic, and they bring liquidity to the market so that businesses that find that their business needs have changed, have a market where they can actively buy or sell their contracts in accordance with their changed situation.

Initial Margin Requirement
The amount of money a speculator must maintain in his/her trading account in order to keep it active.

Inverted Market
When the sale of near term contracts are higher, or at a premium, compared to more distant months, the market is said to be inverted. This is also called “backwardation.”

Limit Order
An order to a broker that specifies a price or time for execution. A buy limit order must be filled at the stated price, or lower. A sell limit must be sold at the stated price or higher.

Liquidate
To liquidate is the same as “offset” or going “flat.” It involves buying or selling the same contract the speculator already has in his or her account.

Liquidity
A market that experiences a high volume of trades is said to be “liquid.” This is generally a good condition in that markets with lower liquidity tend to be more erratic.

Long
Someone has a “long” position if he purchases a futures contract with the expectation that the value of the contract will appreciate. Long is the opposite of short.

Margin Call
Traders are having a trading account. They are required to maintain a minimum amount in their account. This is called the “margin.” The size of the margin is determined by a minimum plus an amount according to the number of contracts one holds. Trades are leveraged. Therefore if a contract decreases in value, the amount of money the trader must have available to cover the changed value can be substantial. If the money available in the account falls below the minimum margin, then a margin call is issued. The trader must immediately transfer funds to the account or must liquidate positions in order to cover the deficit. A margin call is to be avoided. It is somewhat akin to the bank calling to tell you that your checking account is overdrawn. When an account suffers frequent margin calls, it can mean the trader is over extended and is trading with too little capital. They can lead to financial disaster. Too frequent margin calls can force the market to restrain the trader.

Market Order
An order for immediate execution at the next available price is a “market order.”

Maximum Daily Price Fluctuation
Futures markets have some built-in safe guards. One of them is to set a maximum price fluctuation for a contract during one trading period. This helps avoid panic situations. It allows the market to pause and consider the information available. This limit is set by the market. It is also called the “daily limit.”

Minimum Price Fluctuations
The “minimum price fluctuation” is also called the “tick.” It is the minimum amount that a contract price can vary. For instance, a gold contract may have a minimum price fluctuation of $0.10 per ounce. With that limit, price fluctuations in the market will never be expressed in increments of less than ten cents per ounce.

Nominal Price
A “nominal price” is the price recorded for a session in which no actual trading for that contract occurred. It means that if there were offers, there were no bids. If there were bids, there were no offers. Or, it means there were offers and bids, but no agreement on price. A market order for that day, even if it matched the nominal price would not have been executed because no trades occurred. The nominal price is set by the market after the close of trading using a pre-determined algorithm for the options pricing model.

Notional Value

Future's contracts are leveraged purchases. The notional value is the total value of a leveraged position's assets. Small changes in the price, and therefore the notional value, can have very large implications for the margin held by the trader.

Offer
The "offer" is the price at which a trader is willing to sell an asset. It is the opposite of a "bid." The offer is also called the "asking price" or simply the "ask."

Offset
To "offset" is to liquidate a position.

Option
An "option" is the opportunity (option) to buy or sell a commodity or commodity interest, in the future at a specified price. Options can be offered on or off of an exchange.

Position Limit
The "position limit" is set by the market. It is the maximum number of contracts that a trader, either an individual or a firm, can hold. It is the net long or short that a trader can have. It does not apply to hedgers. It helps avoid price manipulation by having a single trader control too much of the market.

Premium
The "premium" is the amount that a contract is trading above the cash value or the fair market value. It also refers to options and is the cost of particular option.

Put
A "put" is an option to sell a commodity at a predetermined price during a defined period of time.

Pyramiding
"Pyramiding" is the practice of using the profits from one position to margin another.

Rally
A "rally" occurs when there is an upward movement in price.

Rematerialize
See dematerialize

Scalp
This is the practice of trading against very small movements in the market. It can mean multiple trades on the same contract within a single hour. Floor traders and locals are typically scalpers. Their full attention is on the market and its price movements, which allows them to trade very quickly based on these small movements.
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Short
To be "short" is the opposite of "long." The concept of "short" is one of the most confusing to people who are not familiar with futures markets. It relates to seeking a profit by expecting that the price will decline. Essential it amounts to selling a contract one did not previously own. To have a short position is to be bearish. One can also be short if a put option is held that increases in value when the market declines.

Spot

A spot market is a market of immediate delivery. In the futures market it can refer to a contract with the nearest month. A spot market is sometimes referred to as a “cash market.” An agricultural wholesale market is a spot market. The owner of product brings to a market. A buyer inspects it. They agree on a price. They buyer pays and takes position of the product at that moment.

Spot Month
The spot month is the delivery month of a futures contract.

Spread
The “spread” is also called the “basis.” It is the difference between the spot price and the futures price. It can also refer to the difference in price between the contracts one holds in different markets or between contracts of different dates.

Stop Order
A “stop order” specifies a price. When the market touches that price, the stop order becomes a market order and is executed. Buy stops are placed above the market price and sell stops are placed below the market price.

Tick
The “tick” is the minimum allowed price fluctuation for a contract.

Volume
The volume is the number of sales or purchases of a futures contract for a specified period of time.

Annex B: Team Composition

The accomplishment of this assignment resulted from a closely coordinated collaboration between USAID Egypt Financial Services project and the Financial Services Volunteer Corps. The latter provided two volunteers for one week and the former provided one consultant for two weeks.

The Financial Services Volunteer Corps is a U.S. not-for-profit, private-public partnership, whose mission is to help build sound banking and financial systems in transition and developing countries. FSVC's core work concentrates on strengthening commercial banking systems, developing central bank capabilities, and building capital markets. Major additional areas of work include the legal framework for the financial system, payments system development, pension reform, and the combating of money laundering and financial corruption. FSVC volunteers were:

Ms. Andrea Corcoran, Managing Director of Promontory Financial Group, LLC, and former Director of the Office of International Affairs of the Commodity Futures Trading Commission.

Narender S. Rathore, Vice President of the National Commodity and Derivatives Exchange Ltd., of India, the fourth largest agricultural commodities exchange in the world, achieving that status after only three years of operation. Mr. Rathore has been involved since the outset of the establishment of the exchange.

The consultant provided by the USAID EFS project was **Bruce L. Brower**, an agricultural commodities specialist and current Chief of Party of the USAID Market Access and Poverty Alleviation project located in Bolivia.