

Government Regulation and the Futures Markets

Gary L. Seevers

A phenomenon has been emerging in this country, and in most Western industrialized countries. The phenomenon concerns institutions, specifically governmental institutions. These institutions are in some broad sense failing. Some are failing to meet the objectives that were promised when they were created; others have failed to adjust to changing economic circumstances and national priorities. A failure of institutions is a much more serious problem than if the GNP fails to grow for a year or two at the norm economists have set for it or even if GNP declines for awhile. Institutional failure takes longer to emerge, is harder to detect and is much more difficult to correct.

A significant part of the institutional problem relates to government regulation, and economists have had something to say about this aspect of the institutional problem. A hardy group of economists has been in the vanguard of efforts to reform the major economic regulatory agencies. Another group of economists has been working toward establishing effective quality-of-life (mainly environmental) regulatory programs although with limited success. Nevertheless, relatively few economists have been working in the regulatory area in recent years. This is probably more because of the difficulty of institutional analysis than a lack of interest. Compared to more formal, abstract economics, or to topical issues such as food and energy, work in the theory and practice of regulation may be both more difficult and less exciting. At any rate, it appears to me that economists are not contributing as much as they could to understanding today's institutional problem.

Fortunately, Harry Johnson addressed some elements of the institutional problem in his usual clear-thinking way. His views address the big question: why has Western society seemingly turned sour in an

Gary L. Seevers is a Commissioner on the Commodity Futures Trading Commission, Washington, D.C.

era of general prosperity? According to Johnson, democracy and economic freedom ("capitalism" in the Adam Smith sense) are opposite sides of the same coin. "Political thinkers of the 1920's and 1930's. . . wondered whether democracy (and economic freedom) could survive the strain of genuine conflict over the distribution of income and wealth and the *free market* principles that should govern it." This concern with class conflict failed to foresee three subsequent developments:

"One was the idea, generated in the Great Depression and matured in wartime management and thinking, that 'capitalism' could not work without both extensive macroeconomic management and intensive provision of social security and other welfare and income cushions for the average citizen."

The second development was increased use of political promises to attract marginal voting groups, where the promises had the effect of extending "the presumed competence of political interference and decision to ever-widening areas of economic life."

Third was the rise of the bureaucracy—made necessary by the additional government efforts to manage the economy, and to make good on the political promises for a better life for the voters. "This bureaucracy has gradually become a politically important rival to private decision-making."

These developments could be summarized by the single idea that "economic decisions are somehow too important to be left to the private decisions of those most directly affected by them."

Today's institutional problem is very much related to this idea. Government intervention in the economy, and government programs, have evolved into an elaborate system. But the new government machinery is being questioned more and more, from all across the political spectrum. New government activities have seldom achieved

the objectives which were promised. Almost always they have had hidden costs from unexpected side-effects. Probably most significant, they have projected government into daily lives and activity in objectionable ways. There is no question that disillusionment has set in, but so far there is no substitute philosophy to guide governmental affairs. While some of us would like to think we will go through a transformation to a free-market philosophy similar to the one occurring when Adam Smith produced *The Wealth of Nations*, it would be intellectually risky to even suggest such a thing for lack of real evidence.

By now you may have observed that my paper seems only remotely related to my assigned topic. I am supposed to relate futures markets to the food industry. The connections are fairly obvious. Food and agricultural commodities account for about three-fourths of total futures trading, measured by open interest, and excluding precious metals. Although the advent of financial "commodity" futures eventually may reduce that figure, at present futures markets service the food industry primarily. It is also widely known that futures are being used increasingly by almost all segments of the food industry; the reason is equally clear, there is a greater economic need. Finally, the ultimate justification for futures trading is that it yields a more efficient (lower-cost) food industry; no one will quarrel with that objective though some may question whether futures trading actually serves that end.

Role of Commodity Futures Trading Commission

Henceforth, I shall discuss the Commodity Futures Trading Commission. This is my current work, and to me it is very much related to the institutional problem. With respect to competitive-market capitalism, futures markets have been a reflection of this form of economic organization for a very long time. So long as economic policy depends heavily on markets to allocate resources, futures trading will have an important function to perform. On the other hand, the imposition of price rigidity either by government or private actions would reduce the economic need for futures trading. With respect to the institutional problem, the CFTC represents a significant increase in government involvement in the futures markets,

and thus is swimming against the tide of skepticism about government regulation.

The CFTC is a lineal descendant of the Grain Futures Administration (1922) and the Commodity Exchange Authority (1936) which were part of the U.S. Department of Agriculture. Congress decided (1974) to transfer regulation of commodity futures from the agricultural establishment to the "fourth branch" of government where other independent regulatory agencies are located. Such agencies have two distinguishing features: they bypass the Executive Branch and report directly to Congress; and their functions include aspects of each of the three other branches.¹ This action eroded some of the Executive Branch's power and authority in agricultural markets at a time of great distrust of the executive powers. But more significant, the transfer gave new prominence to futures trading and its regulation.

For brevity, CFTC regulation can be viewed as centering on the organized commodity exchanges, although our programs extend well beyond the exchanges per se.² All ten active commodity exchanges are in various stages of transition from their original status as limited-membership "clubs" to being quasi-public institutions, still with restricted membership. In effect, the exchanges have become an extension of government (P. Johnson). They continue to operate under their own procedures and rules, but these are all subject to potential review and approval by CFTC. Each revision of the original statutory authority has given government a bigger "handle" on the exchanges, and the exchanges have become more accountable to government, and presumably the public interest.

¹In addition to its quasi-judicial duties, the CFTC serves rule-making (legislative) and supervisory-administrative (executive) functions. For further discussion of the background of how the independent agencies obtained their current separation of powers, see Cutler and Johnson.

²The CFTC has exclusive jurisdiction over its regulatory field vis-a-vis other federal (particularly the SEC) and state regulatory bodies. The scope of its field is not fully determined but the main boundary is "futures" rather than "commodities." The Act encompasses, in addition to all goods and articles, "all services, rights, and interests" traded for future delivery on organized futures exchanges. The Act also permits CFTC to regulate cash market transactions but this boundary is unspecified in both the statute and CFTC interpretation of the statute. Although forward contracts are exempted at present, there is interest in Congress that would require CFTC supervision. The CFTC is also responsible for regulating commodity options trading as well as so-called "leverage" contracts in gold and silver.

Potential of Futures Trading

Futures markets are an enigma to many people and their economic justification is often doubted. However, the CFTC operates from the premise that properly functioning futures markets serve a valuable economic purpose, although they are subject to abuse.³ The need for futures markets depends on those factors which affect price uncertainty for a particular commodity: its economic characteristics (e.g., elasticities); the structure of the private market; and governmental policy, particularly as it affects price behavior. For some commodities there is simply no significant economic benefit to firms from a futures market. An example is primary aluminum ingot, characterized by "producer" prices which are relatively rigid in the short-run. For others (such as steel scrap) there appears to be a need, but the commodity does not lend itself to the specifications necessary for successful futures trading.⁴ This raises one question: under today's circumstances, what is the potential of futures trading? Is the futures concept now seriously under-utilized, and if so, why? Or are futures used at the appropriate level in the economy? Specifically, are firms in the food industry making the optimum use of existing futures markets and are there important new markets waiting to be developed for food commodities? I suspect futures are under-utilized, but we do not know. To my knowledge, there is no research on the optimum level of futures trading for a commodity beyond the individual firm level.

Perhaps this is because the economic benefits of futures markets are not well specified. Quite clearly futures are useful in risk management (hedging) by individual enterprises and in competitive price-setting (price discovery) in commodity markets, both of which improve resource allocation.⁵ However, when I have looked for a

³Although CFTC has considerable discretionary authority, the statute is quite clear on certain matters. Over the years, Congress has reaffirmed its belief in the economic benefits of futures markets, if they function properly which is the object of regulation.

⁴Recent research on characteristics associated with commodities which have viable futures trading has been conducted by Telser and Highinbotham under a grant from the National Science Foundation.

⁵An important question in regard to price discovery is whether futures markets promote competition by making oligopolistic and administered pricing practices more difficult. It seems safe to conclude that futures can help preserve competitive markets, but can they make markets *more* competitive?

satisfactory articulation of the benefits beyond these generalities, and failed to find it, I have concluded that more work needs to be done on the benefits and the economic significance of futures markets.

Certainly the benefits are nothing like the \$600 billion figure (value of annual trading volume) commonly quoted in discussions about the economic significance of futures trading. If dollar figures are to be used, they should be more sophisticated than that one.

For economists to quantify the benefits of futures trading would be a difficult task, just as it would be difficult to develop meaningful estimates of the economic value of the stock exchanges, or other economic institutions. Some quantification may be feasible for futures markets, however, once we have a more satisfactory specification of the benefits.

Achievement of greater price stabilization is a reason often given to justify futures trading. However, do futures markets really serve a price-stabilizing role? The evidence on this important question seems to be inconclusive except with respect to seasonal variability which is only one aspect of price stability (Gray and Rutledge). Professor Friedman's common-sense argument is often cited in support of the stabilizing contribution of speculation, defined as capital invested in selling and buying commodity futures by *noncommercial* interests. His argument that speculation must be stabilizing because speculators must be paid if they stay in business, and therefore they sell at higher prices than they buy, is not very convincing. For one reason, available evidence and conventional wisdom suggest that futures trading is unprofitable for most public speculators. Assuming this is true for public speculators as a group, the combination of professional speculation and public speculation may also be unprofitable. A second reason relates to speculative activity by commercial firms. Is "commercial speculation" profitable? Finally, and most important, while hedging can be price stabilizing for the individual firm, does hedging itself tend to stabilize or destabilize market prices?

Whatever the benefits of futures, the costs appear to be very low and this is one reason to encourage the institution. If we measure "costs" by the value-added in the futures industry (largely the revenues of the brokerage firms) the costs are

under \$1 billion. If we measure costs by employment, the outside figure probably would be no more than 35,000 full-time employees in the futures industry.⁶ If average salaries are \$15,000, this represents a wage bill of about one-half billion, a fairly small figure.

The CFTC is operating, as I said, on the premise that if a benefit-cost calculation could be made it would be favorable, and also that commercial use of futures markets is below optimum. Existing futures contracts could be used more heavily and the establishment of futures for other commodities would contribute to a more efficient economy.

Basic Tools for Economic Regulation

Economic regulation of futures markets relies on three basic tools:⁷ first, CFTC must designate (in effect, grant a license) a commodity contract prior to actual trading and we periodically review contracts and could withdraw the designation at any time; second, "speculative" limits are established on the size of position and volume of daily trading which a trader can do, with certain exemptions; third, CFTC monitors daily futures trading and cash market developments with the objective of preventing activity that would cause artificial prices, particularly during the liquidation phase of each monthly contract.

Contract Designation and Review

The importance of a "good contract" cannot be over-emphasized. Proper delivery specifications is usually the key ingredient. Contracts which fall short of the good contract standard are vulnerable to squeezes, manipulations or congestions which cause them to send out inaccurate price signals or discourage commercial use. A good contract may be difficult or impractical to design for some

⁶About 25,000 individuals are registered with CFTC as floor brokers, account executives of brokerage firms (22,000), trading advisers and commodity pool operators. Information from registration records indicates an extremely high turnover rate of around 25 percent each year for "account executives."

⁷Further discussion is given in the report of the Advisory Committee on the Economic Role of Contract Markets. The remainder of this paper draws upon analysis and recommendations outlined in that report. An earlier analysis by Allen Paul reaches conclusions similar to the Advisory Committee's.

commodities, while for others obsolescence is the problem. The New York Mercantile Exchange potato contract is one which was allowed to develop some serious flaws, and is now being revised under CFTC supervision. The potato futures contract became obsolete by changes in potato markets and marketing practices. If it had been kept up-to-date with commercial practices in the industry, the severe problem with contract defaults might have been avoided. Of course, contract defaults are extremely rare in futures trading. Price aberrations are more common and keeping the specifications of a futures contract consistent with current marketing practices reduces the probability of such disturbances. The old turkey futures contract was also a defective contract. Unlike potatoes, where trading often has been very heavy, there was virtually no trading in turkeys. It was inactive even though firms in the turkey industry have stated that they need a viable futures market to manage risks of price change in their operations. No contract is perfect but many are better than these. The design of better contracts or new contracts is a worthwhile endeavor and economists who specialize in the applied economics of commodity markets are in a position to help in these efforts.

Although the CFTC places high priority on proper contract specifications, we have not required that either new or existing (inactive) contracts demonstrate conclusive evidence that they are or will be utilized for hedging and price discovery purposes. We are concerned that this could turn into a "restricted entry" policy that would stifle experimentation and innovation. Nor does our current policy provide any protection to existing contracts from the emergence of competing futures contracts. That is, we are not greatly concerned about proliferation of too many contracts in the same commodity. For example, if an exchange wanted to trade live cattle, which is now traded only on the Chicago Mercantile Exchange, we would not be inclined to oppose it. If CFTC had the wisdom of Solomon, we could decide which exchange could and should trade what. But government regulatory agencies do not have such wisdom, in my view. Indeed, to become concerned about so-called proliferation of futures trading with its attendant danger of "thinning the market" is a potential regulatory pitfall which, by reducing competition, would discourage innova-

tions, favor the status quo, and protect existing exchanges. There is ample evidence of what happens when a regulatory agency restricts entry into an economic activity.

This is not to say that the hard-line, pro-competition policy on proliferation is a black or white question for economists; few of the issues CFTC faces are. Indeed, several thoughtful economists have questioned my view on proliferation of contracts. One reason is that a degree of protectionism is justified to provide an incentive for innovation; the theory underlying patent law policy should apply. Again, this subject deserves more analysis by economists interested in commodity markets.

Speculative Limits and Hedging

The use of "speculative" limits as a regulatory tool goes back to 1938. Today the CFTC imposes limits for grains, soybeans, potatoes, eggs and cotton. Commercial firms are exempted from these limits to the extent that their transactions qualify as bona fide hedging according to the CFTC definition. The justification for speculative limits probably always was more political than economic and today they are a fairly crude regulatory tool and should be phased out. If this is done, there would be little need for CFTC to define hedging for exemption purposes.

For economists I suspect the concept of hedging is more interesting than the efficacy of speculative limits. Whether or not the CFTC retains speculative limits, and thus needs to have a regulatory definition, hedging as an economic concept will remain important.

The most meaningful definition of hedging is Holbrook Working's concept that a hedge is a "temporary substitute for a future cash transaction." I like this definition because it stresses the role futures markets ought to play relative to cash markets. Futures are auxiliary or supplementary and should not become a permanent merchandizing substitute for spot or forward transactions.

The Working definition seems to cover most legitimate uses of futures markets. This new concept needs to become conventional thinking more than it is today. Under the Working definition the distinction between hedging and speculation is not very significant.

From a regulatory standpoint, the distinction will be significant as long as speculative limits are employed. The question is how expansive to make the definition; i.e., how many categories of temporary substitutes to exempt? Everyone would exempt transactions where a price commitment has been accepted in the cash market, and a futures position is taken to offset the price risk associated with that commitment. Here the futures is a temporary substitute for a subsequent cash transaction that will take place where the price on the original cash transaction is known. This is classical hedging.

The second concept is where a firm uses futures to forward-price a contemplated cash transaction and there is no existing counterpart cash transaction with a price risk. Consider a small meat packer who prices his cattle purchases over the next three months but does not know the price at which he will sell the meat. Sometimes this is called anticipatory hedging, and it conforms to Working's definition. However, does it differ from speculation and should it be exempt from speculative limits? Of course, if the meat packer had a market for his meat at an assured price, it would become classical hedging. Consider another example. Two firms each purchase soybean meal as a production input. Each "hedges" its soybean meal requirements by use of the futures markets as a temporary substitute for subsequent procurement of soybean meal in the cash market. One firm sells the product of the meal into a volatile market (say, protein supplement for livestock feed) and the other sells the product (say, brand name pet food) into a market with fairly stable prices. Under the Working concept, both are hedging even though taking a futures position seems to raise risks for one and reduce it for the other.

As a practical matter, hedging policy is unique to the firm. Some firms do not undertake futures positions in response to particular cash positions; their operations may be too complex.⁸ A large grain trading company might be buying and selling grain all over the world. This information reaches a central decision center and the firm could take a futures position based upon its consolidated exposure and, I am sure, also upon its (speculative) view of the market.

⁸By the same token, some firms do operate by taking futures positions primarily in response to particular cash positions; such a firm does not relate its aggregate futures position to its aggregate cash position.

I am doubtful whether there can be a satisfactory universal definition of hedging for CFTC purposes that would fit all commodities and all legitimate business uses of the futures markets. If you ask a commercial, you will find that "hedging is what commercials do in the futures markets." Many commercials use futures in just that way, as an enterprise to make money alongside the related cash business. Several New York exchanges proposed that CFTC define hedging essentially as the activity of commercials, and this may be a good way to define hedging.

Market Surveillance

The limitations of speculative limits will make the CFTC's daily surveillance of the markets increasingly important. The liquidation of expiring contracts is where problems usually show up, and this is where our economic regulation of the markets will concentrate. As you reach the final days of trading, the traditional fixed limits serve very little purpose and the distinction between hedging and speculation becomes weaker and weaker from both a regulatory and economic standpoint. How CFTC defines hedging may be important for other reasons, but to achieve the objective of accurate prices and orderly markets I suspect its significance has been overstated.

Further Study and Research

Let me conclude with several policy questions which, to answer to the Commission's satisfaction, require further study and research. This is by no means an exhaustive coverage.

Economic benefits and optimal use of futures. The importance of a better specification of economic benefits and optimal use of futures has already been discussed. Conceptually, what are the economic functions (benefits) of futures markets to the economy? To what extent do existing markets serve those conceptual functions?

Price behavior and speculation. What are undesirable forms of price behavior? In what ways, if any, do futures markets provide an avenue for such unwarranted price behavior? What is the role of speculation of various types? E.g., what would

futures trading by uninformed public speculators contribute to the functioning of futures markets? Are waves of public speculation a serious problem? What about the professional floor trader (the "scalper") who trades back and forth during the day but does not carry a position from day-to-day? What about professional traders who do take positions? Have portfolio adjustments between futures and other forms of investment been a cause of commodity price fluctuations? What about tax-spreading?

Some of these familiar questions have been studied. But they remain important questions because they concern CFTC's primary statutory mandate to avoid artificial prices and excessive speculation. They are closely related to the skepticism of futures markets, especially the justification for intraday and day-to-day price movements. Research in this area has been limited simply because data were not available.⁹ This will become a fruitful area because the CFTC will soon require exchanges to keep better records on the sequence of trades during a day. One of our purposes is to conduct and sponsor studies on trading activity and price behavior.

Should CFTC care about price levels? Aside from price stability, there is a large policy question about whether CFTC should care about price levels as these may be affected by speculation or other influences. Should we be completely price neutral, which is our current stated policy? While not really an issue today, whether CFTC has an attitude regarding price levels could be a major issue in years to come. In London, where there has been little regulation of commodity exchanges, the Bank of England is beginning to monitor markets more closely and some of this attention has taken the form of restricting access in order to reduce prices judged to be unduly high. There is concern in London, as there is here, about access to futures markets by government trading agencies, although this is more a matter of potential disruption-manipulation than affecting price levels.

The basic issue is whether restricting access to futures markets, or adding governmental activity,

⁹Recent research by Mann and Heifner raises questions about the day-to-day pricing efficiency of futures markets. The markets do not seem to absorb new information promptly.

serves any useful purpose. To influence commodity prices by trying to regulate futures prices may be equivalent to controlling the weather by adjusting barometers.

While CFTC has awesome regulatory powers, they would, I suspect, prove to be very meager if used to regulate commodity prices. For the CFTC to have an attitude on price levels, it would be necessary to have an activist policy in cash markets. The law may permit this kind of role, and a case can be made that in order to foster and protect competitive price discovery the CFTC should have an active antitrust posture, presumably jointly with other government agencies. The Commission does not take such an expansive view of its role, but such an attitude might become appropriate sometime.

Market participation. Agricultural producers and smaller firms make limited use of futures markets. Is this because the product is poorly designed to meet their needs? Is it because of attitudes which may be based on bad experiences? Is it because of the "knowledge investment" required to start and maintain positions in the markets? I believe easier access to futures markets by smaller firms is desirable and ways should be pursued to facilitate their participation. A brand new market intermediary may be needed to accomplish this objective, or new concepts such as satellite futures markets might be the answer.

Third World Countries are also potential users of futures markets. Both exporters and importers are expressing interest in how they might use futures, mainly to forward-price their purchases and sales. This is one way an individual exporting country can stabilize its commodity foreign exchange earnings even without stabilization schemes for the entire market, or an importing country can lock-in some share of its import bill for internal economic planning purposes. The feasibility of using the futures markets in lieu of commodity buffer stocks to stabilize commodity prices is an idea which surfaces frequently and deserves critical review.

Conclusion

I am a skeptic of government regulation because in practice it is sometimes misguided and often overdone. The CFTC is being established when the number of skeptics is growing. I consider this fortunate because we are constantly reminded of the limitations of government, and the need to concentrate our resources where they will do the most good.

In the long-run, better understanding and regulation of futures markets from an economic standpoint will be an important determinant of CFTC's effectiveness. Establishing a sound research and regulatory philosophy in the early years of the Commission will be essential.

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