Evolution of Commerce and Risk Management in Commodities since 2000 B.C.: Snapshots

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This evening I intend to talk about the historical development of commerce in primary commodities. The form for my talk will be a series of flashes concerning features of this commerce since very distant historical periods. Much of my account will concern derivatives contracts and the legal framework for derivative transactions. Derivatives have played an important role in commodities commerce as instruments for the management of risk and for speculation, and also in modern times sometimes as a source of problems for both market participants and regulators.

Thales of Miletus

Derivatives are often traced back to Thales of Miletus (624-546 B.C) He was a philosopher, astronomer and mathematician. On the basis of his reading of the stars and the weather Thales foresaw one year a bumper crop of olives. He then approached owners of olive presses and offered payments in advance for the right to rent their presses during the harvest (i.e. an option on the use of their presses), should he need them. Thales also negotiated in advance the rent which he would eventually pay the owners. When the abundant harvest of olives which he had anticipated came in, Thales paid the owners of the presses the rent he had negotiated, and charged the olive growers whatever he pleased for pressing their olives since he controlled all the presses. Thales thus cleaned up and ended the ridicule to which he had frequently been subjected on account of his poverty (Millman, 1995:7).

Although we have no reason to doubt the story, derivatives in fact have their origin in a much earlier period of history. But before we turn to this period, definitional issues require attention.

Definition of derivatives

In view of the prominence of derivatives in my talk I should like to begin with a definition which accommodates differences in their ostensible forms in my series of historical snapshots. This definition I take from Ned Swan's remarkable history of derivatives (Swan, 1999: 17-18). The definition is as follows: "A sale of a promise to provide an agreed asset: (1) at an agreed price, and (2) at an agreed future time, which may be settled by choosing from agreed alternatives". Swan continues, "The promised asset can be cash, commodities or anything, and the agreed price can be referenced to any standard of measure. The agreed settlement alternatives may be express or implied by market practice". Though not part of the definition, flexibility of settlement is a desirable characteristic of a derivative because of the associated expansion of the range of its potential benefits. Such flexibility may include changes in either the underlying asset or the parties (through, for example, sale or assignment) prior to settlement. The term, "derivative", came into use only relatively recently. Richard Sandor, an economist long at the Chicago Board of Trade, believes that he was the first to coin the term (Lambert, 2011: 133). The first legal use of the term is in a 1982 Federal Court case, Am. Stock Exchange v. Commodity Futures Trading Commission (Swan, 1999: 5). In the historical sketches which follow various terms and descriptions are used for the contracts and agreements which would now be included in the term, “derivative”.

Ancient Mesopotamia: the code of Hammurabi

In the valley of ancient Mesopotamia were developed early systems of organised agriculture for the production of commodities such grain and olive oil. The increased productivity of agricultural workers was conducive to the formation of urban communities whose food was supplied from agricultural areas. Some of these communities grew to such a size that they engaged in trade with areas beyond their natural hinterlands for needed supplies through contracts specifying delivery at future times.

One of the contracts used during this period was the “grain loan”, which closely resembles a futures contract. Under such a loan, for a price in grain or silver, a seller contracted to deliver grain in the future after the harvest. By the early second millennium B.C. grain loans were in currency between both private persons and temples. After the accession of Hammurabi, king of Babylon between about 1792 until 1750 B.C. grain loans were also made from the royal granaries.

The code of Mesopotamian law - known as the code of Hammurabi - contains regulations necessary for derivative contracts. These regulations concern (1) sales of goods to be delivered in the future and (2) the transferability of rights under contracts of sale. In one clause of the code of Hammurabi, which covers certain types of commodities contracts, basic elements of a derivative are present as follows: for a price agreed when a field is rented to (i.e. a sale is made to) to a tenant the owner of the field has purchased future crops produced by that field (i.e. commodities for future delivery). Subsequently the code specifies that the purchaser (creditor) takes the risk that the cultivator will get a poor harvest, in which case the purchaser cannot cancel his contract and must in this case suffer the financial consequences. Moreover under another clause of the code of Hammurabi the renter of the field may assign cultivation of the field to somebody else. The owner remains entitled only to the future delivery of the grain for which he contracted, and cannot specify the identity of the supplier.

In ancient Mesopotamia temples might fulfil functions more recently assumed by exchanges, clearinghouses and regulators (Swan, 1999: 37-38). Merchants assembled in temples to do business. Temples were also used as repositories of contracts, as parties to contracts, and as grain warehouses. Moreover they provided quantity and quality standards for commodities. Temples - like modern clearinghouses - would probably have played the role of watchdogs over the solvency of merchants doing business there. Swan also believes that, in an economy where precious metals rather than coinage were used for payments, the staff of temples was probably entrusted with the task of offsetting the accounts of those who traded there, thus reducing merchants’ needs for holdings of precious metals.

The transactions of foreign merchants during this period were often governed by a separate law administered separately by the merchants’ own magistrates. Such merchants had a separate community (karu) beyond the city walls. The institution of the separate merchant community outlived the last Assyrian empire under the name of pandokien in Ptolemaic and Coptic Egypt, funduq in the Muslim world, and fondachi in Italian merchant cities trading in the Middle East.

Ancient Greece and Rome

Sales of commodities for future delivery continued to be a feature of ancient Greek commerce, including the Hellenistic empire in Egypt, as well as of the commerce of the Roman Empire which followed. Roman law is of interest here owing to inclusion in it of the development of the law of sales contracts. The essential elements of a valid sales contract were the agreement of the parties involved, a price, and the thing which was being sold. Contracts for the sale of things which would come into the seller's possession only in the future were covered in the law of sales contracts . Thus contracts were valid for the future delivery of such commodities as still unharvested wool, grapes, grain, and olives.

Despite the breadth of the Roman law of sales contracts assignment or transfer of contractual rights and obligations under a derivative contract was not initially enforceable. Eventually this changed through the admissibility of making new contracts to replace the old (in modern terms novation). This was followed by gradual extension of the right of transfer between the creditors of derivatives contracts (Swan, 1999: 73-81).

Trade promotion was not a major objective of policy under the Roman Empire, which was concerned rather with importing the goods necessary to feed and to house the population of Rome and to obtain the cash required for imperial administration. Futures contracts were none the less extensively employed by merchants as part of the financial processes required for these purposes.

The Middle Ages and medieval fairs

The decline of the Roman Empire was accompanied by declines in the quality of economic activity and output and declines in cross-border trade. Indeed, for economic life in most of Europe "people were organised on a system which enabled them to support life with the least commerce possible. Instead of being concentrated in towns, they were isolated in little groups, often called manors, one of which would be composed often of less than 100 people, who got their living from the square mile or so of land surrounding them...The chief point [of the economic life of these village groups] was the self-sufficiency of each group...Not only the food but nearly everything else had to be raised where it was to be consumed. Houses were constructed of materials from the forest, clothes were made out of flax and wool from the village fields, furniture and implements were made at home. Nearly every village had a mill, usually run by water, to grind its meal or flour; some villages had a smith or carpenter; a few special artisans besides those suggested were to be found in the ordinary manor."(Day, 1922: 34-35).

Around 1000 A.D. towns began to re-emerge as a major form of settlement. The position of towns "was determined by two important conditions of existence, political protection and the chance for profitable trade. People found the former by nestling under the walls of some castle or monastery...The latter object was generally attained by founding the town at some break in a line of transportation and where merchants would naturally congregate to rest and exchange their wares...The growth of towns...led to a specialization in manufactures which was impossible before. All the industries that had been carried on in villages were continued in towns by professional craftsmen, and new ones were added as the demand for them grew. There were from a dozen to a score of handicrafts which supported for centuries the staple manufacturing groups of the towns: butchers, bakers, brewers, blacksmiths, goldsmiths, coppersmiths, masons, carpenters, cabinet-makers, wheelwrights, skinners or furriers, tanners, shoemakers, saddlers and harness makers, weavers, dyers, fullers, and tailors" (Day, 1922: 42, 48-49).

Unsurprisingly the expanded range of goods available was accompanied by the development of markets where they could be traded. Fairs became an important institution for this purpose. Fairs attracted buyers and sellers often from a great area. They served the needs of wholesale as well as retail trade. But fairs differed from modern exchanges in that they took place only intermittently rather than according to a more or less continuous schedule.

Fairs typically flourished under the protection of a feudal lord. His promotion of them was intended to increase revenues from the taxes imposed thereon. The fairs could be splendid occasions to which people flocked for social as well as business reasons – to view sideshows involving wild animals, trained dogs, monstrosities, poets, musicians, actors, clowns, and halls for dancing and gambling. The lord attracted merchants by guaranteeing them various types of protection and providing freedom of trade within the fair itself.

Amongst the best known were the six fairs of Champagne, each of which lasted more than six weeks and, operating in rotation, provided, unlike most other fairs, an almost continuous market. Wares sold included minor manufactures, slaves, and several primary commodities – cloth (in the form of silk, wool, and linen), drugs and spices, raw materials such as salt and metals, leather, skins, and furs.

The fairs became the location for forward contracts for future payment. These lettres de faire were first issued only for the sale of commodities between a single buyer and seller. Subsequently they evolved into negotiable instruments which might be transferred between several parties before final arrival at the warehouse where the goods specified in the lettre de faire were stored. Owing to the difficulties of travel and transport during this period some merchants brought only samples of their merchandise to the fairs, and lettres de faire facilitated such trading by sample.

Payment of bills and settlement of bargains at trade fairs could involve traders from widely dissimilar geographic and ethnic backgrounds with result that there were often disputes. The disputes were settled at special fair courts in according with rules typically derived from Roman Law. These rules were to become the basis of the lex mercatoria or law merchant widely recognised in Europe by the thirteenth century. The rules (which have some similarities with the regulations of modern commodity exchanges) defined contract terms, determined methods of sampling, inspection and grading of commodities, and specified the location and date of delivery of goods (Swan, 1999: 107-109; Teweles and Jones, 1998: 6-9).

The Champagne fairs eventually went into decline partly owing to the imposition of heavier dues when the fairs were brought directly under the French king and partly owing to impact of wars. Merchants were increasingly diverted from inland France to Flanders and to locations better served by the growth of sea trade.

Dojima rice market

My next flash concerns what is recognised as the first organised futures market in the modern sense, part of the Dojima rice market at Osaka in Japan. This market, established in 1688, was located on a small island at the delta of three main rivers in Northern Osaka. The market supported more than 1,300 registered rice dealers. Moreover it enabled the clearing of surplus rice through forward transactions ahead of harvests. When feudal landlords needed to raise money, they began to sell tickets (warehouse receipts) against rice stored in warehouses. These tickets became a form of currency for rice dealers, and the secondary market in such tickets became a genuine futures market (Alletzhauser, 1990: 26-30).

By 1730 the Tokugawa Shogunate (the imperial government) designated and recognised the market as cho-ai-mai (literally translated as “rice trade on book”) (Teweles and Jones, 1998: 10). Several rules of this market were similar to those of modern futures trading: .

- The term duration of contracts was limited.
- All contracts within any term were standardized.
- A basic grade for each contract was agreed in advance.
- No contract continued to be valid in a new contract period.
- All trades had to be cleared through a clearinghouse.
- Every trader had to establish a line of credit with one of the clearinghouses.

The market was limited to the trading of futures, and the delivery of cash commodities was not permitted. The drawback of this restriction was that the relationship between futures and cash prices was often anomalous, and there were erratic price fluctuations. The resulting discrepancies between spot and futures prices led to the closing by the imperial government of the market in 1869. However, faced with chaotic price fluctuations in the period which followed, the imperial government reopened the market but this time with settlement of contracts permitted through the actual delivery of commodities. This improved the linkage between cash and futures prices, while also reducing the instability of rice prices.

Commodity futures in the United States before 1920

The commodity futures contract in the United States developed out of the To Arrive contract for grain. To Arrive contracts were similar to the medieval lettre de faire. To Arrive contracts enabled owners to sell grain before it arrived at its destination. They thus transferred the price risk during the period of transportation to dealers and, processors, who had to purchase the grain for their operations, and to pure speculators lacking a hedging interest in the commodity. However, the To Arrive contract had several drawbacks form the point of view of both hedgers and speculators. The drawbacks included the following: (1) the varying grades and sizes of shipments, (2) varying terms of payment, sometimes subject to individual bargaining; (3) frequent secrecy with respect to prices which led to unequal treatment of different buyers and sellers such as discriminatory price concessions being made to larger operators; (4) questionable reliability of buyers when it came to fulfilling their end of the contract; (5) damaged goods or goods of the wrong quality on arrival; (6) lack of liquidity on the buyers’ side leading to difficulties in disposing of the contract at will.

The futures contract was designed to avoid these difficulties through the following means (Gold, 1975: 11-15):

1. The deliverable grades and the size of contracts are fixed.
2. Payment must be made on delivery.

3. Prices are established openly by open outcry of bids and offers so that equal access to the best prices is established for buyers and sellers.
4. The clearinghouse associated with the exchange guarantees the fulfilment of contract performance, even if one party to the contract goes into bankruptcy.
5. Commodities are inspected by exchange or government inspectors so that grades and qualities are certified for delivery.
6. Owing to the enforcement of trading rules and the concentration of trading at a single location contracts can easily be liquidated .

These principles are at the heart of self-regulation and official regulation of commodity exchanges. However, exchange trading in practice has frequently been at odds with these principles. Much of the controversy over the effectiveness of the regulatory framework of commodity markets has concerned failures of regulation and self-regulation in precisely these areas.

The first futures exchange in the United States was the Chicago Board of Trade (BOT) organised in 1848. Futures trading gradually became a major feature of the exchange during the 1850s. The growth of trading on the Chicago BOT reflected the pivotal role of Chicago in the internal commerce of the United States in grain, hides and meat. The establishment of other commodity exchanges followed between the late 1850s and 1890: The New York Produce Exchange and the New York Cotton Exchange, the Milwaukee Chamber of Commerce, the Merchant Exchange of St Louis, the Duluth Board of Trade, the Minneapolis Chamber of Commerce, and the Kansas City Board of Trade.

Early legislative initiatives at state level targeted the following: (1) off-exchange trading in commodities (which was subject to fewer rules); (2) corners whereby individual market participants or small groups, usually buyers or longs, mounted squeezes against sellers or shorts by gaining control over a large proportion of supplies of a commodity and long future contracts; (3) and “bucket shops”. Bucket shops” were establishments where bets could be made on the prices of commodities. The bets were not executed as contracts on an exchange but instead were placed on the bucket shop’s books. Like a bookie the bucket shop offset these bets with its own resources or, as some successful wagerers discovered when they came to collect their winnings, simply absconded without meeting its obligations. So popular did bucket shops become that gambling on grain was viewed as a national pastime by the turn of the century (Markham, 1987: 9-10).

Erratic movements of prices in the 1890s and the association in the popular mind of futures trading with gambling and excessive speculation led to legislation in several states against bucket shops and gambling on the prices of commodities. In the United States Congress similar sentiment led to multiple attempts to exercise greater control over futures trading or even altogether to prohibit such trading as well bucket shops. Indeed, 200 bills were introduced in the United States Congress for this purpose between 1880 and 1920. These initiatives were accompanied by several Congressional investigations of grain trading.

Unsurprisingly the bills designed to tighten regulation were fought by the exchanges. However, legislation of a more technical character was passed by Congress. The Cotton Futures Act of 1914 established a commercial difference system for pricing and federal standards for the grading of cotton. The Grain Standards Act and the Warehouse Act aimed to standardize conditions for the delivery and storage of commodities subject to futures contracts.

In 1920 a massive study of the grain industry by the Federal Trade Commission was published. This study covered every aspect of commodity trading, hedging, market practices, and the collection and diffusion of market information by exchanges. Developments which could lead to the possibility of market abuses were examined such as the development of private wire systems, trading against customers' orders, bucketing of orders, and favours exchanged between traders (Markham, 1987: 10-12).

Commodity futures in the United Sates from 1920 until 1974

The entry of the United States into World War 1 was followed was followed by "a frenzy of speculative trading in commodities" (Markham, 1987: 11). Price controls were introduced in response to this frenzy. Wheat trading was resumed on the Chicago BOT only in July 1920. Violent price fluctuations were also experienced in the market for cotton during the period before the outbreak of war. To lessen the effects of these fluctuations limitations on daily price movements were introduced for the first time. The rationale of these limitations was to allow traders time to assess the market factors that had caused the price swings, to permit the exchanges to collect margin calls, and to facilitate the meeting of such calls by traders.

When wheat trading resumed, prices immediately dropped sharply (by 57 per cent) bringing them to a level below the costs of production. The spectacular price drop went further: the December futures contract fell from USD 2.75 to USD 0.85. Congress's response was to enact the Futures Trading Act of 1921. Price manipulation and bucket shops were to be curbed through the imposition of a prohibitive tax on grain futures unless they were traded on government-licensed boards of trade ("contract markets"), which met prescribed standards. A prohibitive tax was also imposed on all grain options. However, the Futures Trading Act was declared unconstitutional by the Supreme Court in 1922 on the grounds that the statute involved an unconstitutional exercise of Congressional taxing power.

Congress promptly introduced new legislation, the Grain Futures Act This was designed to achieve the same objectives but was based on Congress's authority to regulate interstate commerce. This time the Supreme Court rejected a challenge to the Act's constitutionality (Markham, 1987: 14-16). As in the case of its predecessor, commodity exchanges had to be designated as "contract markets" under a licensing system by the federal government. The exchanges were to be responsible for the prevention of various kinds of price manipulation. Such a regulatory scheme has been the core of subsequent regimes for the commodity markets.

Day-to-day responsibility for overseeing implementation of the Grain Futures Act was to be the responsibility of the Grain Futures Administration within the Department of Agriculture. The Grain Futures Administration was an entity with only a small staff in Washington and field headquarters in Chicago where it gathered daily reports on trading. Clearing members of exchanges were to report daily positions of their customers which exceeded a designated amount and were in consequence classified as "special accounts". The principal role of the Grain Futures Administration was to conduct investigations and bring violations of the Act to the attention of exchange officials who were then responsible for correcting them.

Despite spotty implementation the reporting of large positions was a continuing source of controversy between the Grain Futures Administration and traders. The latter claimed such reporting frightened away large bullish speculators and thus depressed prices. The reporting of large positions was definitively suspended by the Secretary of Agriculture in October 1932.

In the aftermath of the 1929 crash of the stock market the prices of wheat and other grains weakened with a calamitous collapse in 1932 owing to speculative trading (Markham, 1987: 22-27). The Grain Futures Administration conducted an investigation, which found that a key role in the price collapse had been played by ten traders who controlled fifteen speculative accounts. When a substantial part of these large holdings was dumped on the market for the purpose of profit taking, the resulting decline in prices forced the liquidation of large accounts which had been inadequately margined. The Grain Futures Administration concluded that the resulting "economic catastrophe" again demonstrated the need for position limits to avoid excessive concentration of positions in a few large accounts.

In his message to Congress calling for tighter regulation of speculative activities in commodity trading President Roosevelt also drew attention to the growth in links between speculative activities in the commodities and securities markets –in our time once again a topical subject. This observation accorded with findings by Congress that, especially after the passage of the Securities Exchange Act of 1934, there was an increasing tendency for professional speculators to transfer their activities from the securities to the commodities markets.

Also of interest during the run-up to the enactment of Commodity Exchange Act of 1936 was a survey by the Department of Agriculture of the background of individuals trading futures contracts. The traders included 6 dead men, 18 undertakers, 2 butlers, 5 chauffeurs, 6 janitors, 12 candy store operators, 1 clam digger, 25 clergymen, 1 duck raiser, 1 fiduciary, 1 knife sharpener, 32 labourers, 19 manicurists, 3 police chiefs, 3 senators, 1 professional gambler, 104 secretaries and stenographers, 36 students, and one ostrich feather (sic). Among the greatest concentrations of traders were 1,025 housewives and 530 unemployed.

The Commodity Exchange Act of 1936 introduced more exacting registration and regulatory requirements than those of the Grain Futures Act. It also prohibited outright trading practices believed to contribute to excessive speculation and price volatility, market manipulation, and fraud. "Commodity" for the purpose of the Act was defined to include specifically enumerated agricultural products such as grains, butter, eggs, potatoes, rice and cotton.

The Act also specifically outlawed options trading in the commodities just enumerated since such trading was widely believed to be pure gambling that had significantly contributed to the collapse of wheat prices. This ban effectively ended options trading in commodities for the next 35 years. Position limits restricting the size of positions which could be held by speculators were also established by the Commodity Exchange Act. The limits were to be flexible so as to avoid unduly disrupting the functioning of the commodity markets. They were to be imposed only after a comprehensive investigation of their probable effects. The new requirements of the Commodity Exchange Act were to be administered by the Department of Agriculture's Commodity Exchange Authority.

In the decades which followed the enactment of the Commodity Exchange Act the commodity markets grew in size, complexity, and commodity coverage (Markham, 1987: 35-47). During

World War 2 trading in commodities was subject to additional restrictions but the markets remained open. As ever, there were complaints about practices leading to price manipulation or volatility, leading on occasion to regulatory intervention by the Commodity Exchange Authority.

Some of the problems encountered in the commodity markets involved commodities not subject to regulation by the Commodity Authority. For example, in 1954 the Federal Trade Commission, an agency with broad responsibility for preventing anti-competitive practices, charged that one of the contracts traded on the Coffee Exchange was an unreasonable restraint of trade which hindered competition. The terms of the contract were so restrictive that the market for it was very thin. This created the possibility that at delivery time supply would not be sufficient to meet demands of buyers, so that there would a danger of unduly adverse price movements. The Coffee Exchange entered into a consent decree under which it broadened the terms of the contract to permit coffee trading covering approximately 70 per cent of the world's coffee crop. The Senate Committee on Agriculture recommended in the same year that coffee futures be added to the coverage of the Commodity Exchange Act. However, action to this effect did not take place until 1974.

One of the more baroque cases brought by the Commodity Exchange Authority involved onion futures, a contract traded on the Chicago Mercantile Exchange (Lambert, 2011: 40-44). The onion futures market had a history of very sharp fluctuations in price and was also subject to a number of attempted corners facilitated by its small size.

The corner and price manipulation of the onion futures market in 1955 involved two of the outlandishly colourful characters who often figure in major incidents on commodity exchanges. One was Sam Siegel, owner of cold storage facilities in a suburb next to Chicago's newly completed O'Hare Airport. The other was Vincent Kosuga, an onion grower from New York State, whose mother was a Russian Jew who had been converted to Catholicism. Kosuga himself was a dedicated Catholic who gave so much money to the Vatican that he was accorded private audiences with Popes, and enjoyed the right to ride in the Poe's private elevator.

In the autumn of 1955 Kosuga and Siegel bought enough onions and onion futures to control 98 per cent of the market. They then reached an agreement with a group of onion growers under which the growers would buy part of the onion stock of Kosuga and Siegel, while Kosuga and Siegel themselves would continue buying in such a way that the price would move in the directon of USD 4 a bag. Kosuga and Siegel then double-crossed the onion growers through massive selling even as farmers grew more onions to sell at the higher prices. As a result by March 1956 the price had been driven down to 10 cents a bag, a price so low that onions were worth less than the bags holding them. Many growers went bankrupt. The unlucky owners of rail cars on tracks in Chicago rail yards which had been used to store the onions had to pay rent until they figured out a way to dispose of the rotting onions.

The onion growers now wanted the futures market killed. Gerald Ford, Michigan Congressman and later President of the United States, introduced a bill to ban trading in onion futures. The Onion Futures Act was eventually signed into law by President Eisenhower in August 1958.

During the postwar years into the 1960s several new contracts were introduced either to meet new hedging needs or to furnish new opportunities for exchange traders. One of these innovations is of interest because of the way in which it illustrates the technical problems which must sometimes be solved as part of introducing a new contract. This was the contract for live cattle launched on the Chicago Mercantile Exchange in 1964 (Lambert, 2011: 58-63; Teweles and Jones, 1998: 486-490) Here the problem was grading. Grading in cattle markets had traditionally required the eye of a cattle man. Moreover gradability in the commodities business had been linked to inertness which facilitated storage. Live animals were much more difficult to store. They needed food and water and might not survive. Moving them was difficult.

Nevertheless, the project of introducing futures contracts for live cattle went ahead. The trading unit for the live cattle contract is 40,000 pounds of choice-quality live steers of United States Department of Agriculture estimated yield grade 1,2,3, or 4. There are various other delivery specifications, of which some depend on subjective criteria so that Department of Agriculture graders inspect the cattle to determine whether they are fulfilled.

During the 1960s pressure again developed for a strengthening and extension of regulatory authority under the Commodity Exchange Act. Particular targets of this pressure included the continuation of abusive pricing practices (to stop which the Department of Agriculture wanted injunctive authority), the inadequacy of fitness standards for the registration of future commission merchants, and the inadequacy of the commodity coverage of the Commodity Exchange Act. The resulting 1968 amendments of the Commodity Exchange Act strengthened the regulatory authority of the Department of Agriculture over traders and market practices. The amendments also extended the commodity coverage of the Act to futures contracts for livestock and livestock products (Markham, 1987: 52-56).

The CFTC Act of 1974 and the changing character of derivatives regulation

The pressures for a more comprehensive overhaul of the regulation of commodity futures trading nonetheless did not abate, and in 1974 Congress passed the Commodity Futures Trading Commission (CFTC) Act. The new set of amendments overhauled and expanded the Commodity Exchange Act. They also created the CFTC with a mandate to regulate commodity futures and options. A number of features of the CFTC Act and its implementation merit special attention:

- The scope of commodities regulation was greatly expanded in part to respond to the development of world markets for new commodities such as coffee, sugar and precious metals since 1936, the date of the Commodity Exchange Act. The term, “commodity” was redefined so that it now included in addition to previously enumerated commodities virtually “all other goods and articles...and all services, rights and interests in which contracts for future delivery are presently or in future dealt in”.
- The Commodity Exchange Act’s ban on the trading of options involving the previously regulated commodities was retained. However, the possibility of a market in the commodities newly covered by the CFTC Act was left open.
- After beginning its operations in 1975 the CFTC began an examination of whether option transactions in the newly covered commodities should be permitted. In 1978 the CFTC expressed its conclusion that “the offer and sale of options has for some time been and remains permeated with fraud and other illegal practices”. The CFTC therefore adopted regulations prohibiting the domestic sale of most commodity options with the exception of options sold to purchasers needing such options owing to links to their business or commercial operations.

In 1981 the CFTC announced a pilot programme for the trading of options on futures contracts – a programme which was gradually extended to cover a greater number of commodities. Finally in 1986 the CFTC adopted regulations permitting exchange-traded options.

During the period since the late 1960s a number of exchange-traded futures contracts on financial instruments were introduced. This new departure raised the issue of which of the CFTC or the Securities and Exchange Commission (SEC) should have regulatory authority over such contracts. Under an agreement, the Shad-Johnson Accord, which was not primarily concerned with commodity contracts as such, the CFTC was given jurisdiction over all futures contracts, while the SEC was given jurisdiction over options on securities and various other options which traded on national exchanges. The accord was broadly accepted by Congress as part of the 1982 amendments of the Commodity Exchange Act.

Derivatives regulation from the 1980s onwards has increasingly covered both commodity and financial derivatives. Moreover many more of the rules of this legislation are directed at over-the-counter (OTC) or customised derivatives. Much of the debate and lobbying over the contents of what were eventually to be 1992 amendments of the Commodity Exchange Act (the Futures Trading Practices Act of 1992) concerned the scope of the mandate to be accorded to the CFTC to exempt OTC derivatives from the off-exchange prohibitions of the Commodity Exchange Act. That financial derivatives were those primarily targeted by the 1992 Act is evident from the CFTC's 1993 definition of swap pursuant to the Act: "swap agreement" means ... a rate swap agreement, basis swap, forward rate agreement, commodity swap, interest rate option, forward foreign exchange agreement, rate cap agreement, rate floor agreement, rate collar agreement, currency swap agreement, cross-currency rate swap agreement, currency option, any other similar agreement (including any option to enter into any of the foregoing) (Henderson, 2003: 414 and 823). The 1992 Futures Trading Practices Act also gave the CFTC additional flexibility to exempt appropriate agreements, contracts, and transactions from the requirements of the Commodity Exchange Act. The exemption provided under the Act for OTC derivatives was to prove of great value to Enron, an important part of whose business consisted of such contracts (Partnoy, 2003: 302).

The way in which regulation of commodity and financial derivatives is now combined can be illustrated still further from the Commodity Futures Modernization Act of 2000 (Henderson, 2003: 422-424). This Act was intended to resolve many remaining uncertainties as to the regulatory status of swaps. The approach of the Act is to provide a still more fleshed out definition of swaps together with specification of what institutions or persons are permitted contract participants (in the Act's terminology "eligible contract participants"). Varying sub-categories of relief are provided in accordance with these definitions - separately in relation to United States securities acts, on the one hand, and to the Commodity Exchange Act, on the other.

Two broad categories of swap agreement are created by the Commodity Futures Modernization Act for regulatory relief. (Neither category applies to agriculture-based transactions.) These two new categories are (i) exempted commodities and (ii) excluded commodities. Broadly speaking, exempted commodities are spared from most of the provisions of the Commodity Exchange Act but are limited to particular types of derivative and to transactions by permitted market participants. Excluded commodities, on the other hand, which are generally not traded on a trading facility, are also largely free of regulation under the Commodity Exchange Act and are not subject to reporting obligations or to a pervasive level of market monitoring. The permitted market participants include companies, firms and persons considered sophisticated enough to take on and understand the risk of a derivative (Parker and Perzanowski, 2010: 538 and 549-554).

The 1992 Futures Trading Practices Act had already removed exempted commodities from the scope of state laws on bucket shops and gambling. The Commodities Futures Modernization Act completed the removal from the scope of state laws on these subjects for most other OTC derivative transactions.

This more comprehensive regulatory scope, covering as it does both commodity and financial derivatives, is now characteristic of legislation concerning derivatives. In a sense it is the natural consequence of the expansion of links between the financial and commodities markets and of the substantial trading operations of major banks and other financial institutions which cover both markets.

Thus the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank), recently passed by the United States Congress but still lacking many of operational regulatory rules which are being drafted by the responsible regulatory agencies, targets both commodity and financial derivatives in Title VII, though clearly the principal focus of Title VII is financial derivatives. Dodd-Frank attempts to redress legislative and regulatory measures since the early 1990s which to a significant extent placed OTC derivatives beyond the authority of the CFTC and the SEC.

The following useful overall summary of Title VII has been given by the United States law firm, Sidley Austin LLP: "The centrepieces of Title VII are mandates for traders to execute OTC derivative transactions on regulated exchanges and to submit those trades for clearing to regulated clearinghouses, as well as new regulatory regimes for dealers and major OTC derivative market participants. Many OTC derivatives will now be subject to mandatory margin requirements and many market participants will now be required to maintain specified amounts of regulatory capital. Title VII eliminates virtually all exemptions from the Federal securities and commodities laws for OTC derivatives. It takes a bifurcated approach to regulation of OTC derivatives, giving the CFTC jurisdiction over swaps that are not security-based swaps (SB swaps) and the SEC jurisdiction over SB swaps. A participant in both the swaps and the SB swaps markets will therefore be subject to regulation by multiple regulators. The swap and SB swap provisions of Title VII have limited territorial effect."(Sidley Austin, 2010: 10).

Dodd-Frank has been criticised with some justification for its length and complexity. In the law's defence one can reasonably maintain that Dodd-Frank restores a comprehensive regulatory regime for institutions and OTC transactions after the undermining of the previous regime by earlier laws and regulatory decisions. In establishing the parameters for the new regime Dodd-Frank had to take account not only of the convergence of commodity and financial markets but also of the rapid proliferation of contracts, markets and institutions during recent years. What follows is not a wide-ranging review of the Act's provisions but rather remarks on features of the Act which are an extension of legislation discussed earlier in this talk or which highlight ways in which regulation has had to be extended to new subjects and issues.

Dodd-Frank is principally concerned with the regulation of "swaps". The definition of swap (including here the security-based swap) for the purpose of the Act is broad enough to include virtually any OTC derivative. The Act actually prohibits swaps on agricultural commodities except to the extent specifically permitted by the CFTC pursuant to its general exemptive authority or by a CFTC rule or order. Three other general points about the Act's coverage seem especially worthy of note:

- Dodd-Frank is explicitly concerned with the regulation of systemic risk or threats to overall or major sectoral economic stability. Such risk was not a subject to which attention was given in earlier legislation on commodity markets. Clearly the systemic risk associated with financial derivatives is the principal target here but the potential coverage of commodity markets, if necessary, merits attention.
- Dodd-Frank addresses cross-border issues and extra-territorial effects where there is a significant relation to United States commerce or where the objective of transactions is to contravene CFTC anti-evasion rules. Such effects were not included in earlier commodities legislation. The CFTC, SEC, and other prudential regulators are to consult and coordinate their actions with foreign regulatory authorities in the interest of international harmonisation of swap regulation. If the CFTC or the SEC determines that the regulation of swaps or swap markets in a foreign country poses a threat to the stability of the United States financial system, the agency may initiate action designed to prohibit an entity domiciled in the foreign country in question from participating in swap activities in the United States.
- Dodd-Frank extends explicitly extends the CFTC's traditional authority for the control of market manipulation from futures and cash-market transactions to swaps.

Some of the fiercest battles during the Congressional debates on Dodd-Frank concerned rules governing government financial assistance to "swap entities". Much of the controversy concerned the extent of the requirement that banks to which benefitting such assistance is available should move their swap operations into separately capitalised affiliates. Broadly speaking, the end-result in the legislation was that banks benefitting from deposit insurance were permitted to continue to engage in swap activities to the same degree that they are permitted to engage in cash-market transactions on assets eligible for such transactions under regulatory rules for banks. In other words swap transactions can continue so long as they have a demonstrable link with normal commercial banking activities but not transactions which constitute trading as an independent activity.

Important parts of Dodd-Frank bear upon reporting and transparency. The CFTC and the SEC are accorded broad authority to gather information on swaps and swap markets. More important here are probably the obligations for the mandatory clearing of swaps or their reporting to swaps data repositories. These obligations are integrally associated with transparency concerning those holding the swap positions. Swaps are to be submitted to approved clearing agencies so long as the CFTC or the SEC has designated the category of swaps in question as one which is to be cleared. Swaps subject to the requirement of mandatory clearing must be executed on a designated contract market or Swap Execution Facility (a trading facility or platform where multiple participants can execute or trade swaps by accepting bids and offers made by other participants from among those participating in the facility or platform). There is an exemption from the mandatory clearing requirement if one of the counterparties to the swap is a non-financial entity using the swap for hedging (the "end user exemption"). In the case of a swap not eligible for clearing Dodd-Frank requires both parties to the swap to report the transaction to the CFTC, the SEC, or to a "swap data repository".

Two long traditional subjects of legislation on commodities markets are also included in Dodd-Frank. The Act provides new authority to the CFTC and the SEC to set position and trading limits. Moreover the Act creates a new reporting regime for large swap traders which applies to market participants not otherwise regulated as swap entities. Moreover Dodd-Frank partially repeals the pre-emption under previous Acts of state laws on gambling and bucket shops as they are applied to derivatives. But a new pre-emption of state laws is introduced for transactions involving permitted contract participants and transactions effected on a national securities exchange.

This concludes my remarks on Dodd-Frank and my talk. I thank you for your attention.

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