

THE FUTURES INDUSTRY: FROM COMMODITIES TO THE OVER-THE-COUNTER DERIVATIVES MARKETS

Origin, Purpose, Development, Controversy, and Regulation of the Most Volatile Financial Contracts in the World.

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The Futures markets are often overshadowed by the highly prolific and actively traded securities markets. The popular financial television programs spend most of their airtime reporting on the ever-changing share prices of equities, earnings reports, analyst upgrades and downgrades, IPO's, governmental economic reports, federal reserve comments, interviews with CEO's, as well as the latest company press releases. In contrast, only a few token moments are devoted to the Futures with just a handful of prices quickly flashed across the television screen as the program fades away for commercial break.

This lack of television coverage may seem to indicate that Futures are somewhat insignificant as compared to the securities markets. However, such a caricature borders on economic heresy as Futures are no longer confined to traditional commodity markets from which they evolved. Historically, Futures were called "Commodities" or "Commodity

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Futures”. However, explosive growth during the last two decades has occurred with Futures contracts expanding into many new frontiers such as “energy” (crude oil, unleaded gas, heating oil, natural gas, and electricity), “currencies” (British Pound, Japanese Yen, Swiss Franc, Euro Currency, and U.S. Dollar Index), “interest rates” (Eurodollar, T-Bonds, T-Notes), and “stock indexes” (S&P 500, Nasdaq, Dow Jones). Today, the term “Commodities” (although still in use) is slowly being replaced in favor of the more general and all-inclusive term, *Futures*.

Entities concerned about fluctuations in these markets transcend the typical grain and livestock producers of past decades. Today, oil and gas producers, mutual fund companies, hedge funds, domestic and multinational corporations, publicly traded companies, utilities, municipalities, states, foreign countries, insurance companies, banks, and other institutions realize their financial stability is not guaranteed should they fail to properly manage their price risk exposure. Futures and Options are the essential tools that market participants use in order to reduce price risks and insure the predictability of profits as they strive for long term financial viability.

The Futures Markets regulatory framework was initially designed to guarantee that all transactions would be traded on regulated exchanges through regulated intermediaries subject to a margin requirement system. Under §4(a) of the Commodity Exchange Act (CEA), most *off-exchange* traded futures contracts were prohibited. However, in 1992, the CEA was amended to allow the Commodity Futures Trading Commission (CFTC) the ability to exempt certain futures contracts meeting the requirements as provided in §4(c) in the CEA.

During the last two decades, Futures have evolved into other financial products called “Derivatives” which trade *off-exchange* on the Over-the-Counter (OTC) Market in contrast to

the typical Futures contracts. During the 1990's, the OTC Derivatives mushroomed into a market that was three times larger than *exchange traded* contracts.² Subsequently, entities trading in Derivatives suffered millions of dollars in losses due to alleged fraud, lack of expertise, poor internal supervision, improper leverage, while others blatantly failed to appreciate the underpinnings of Derivatives and the colossal risks associated with these financial instruments. Despite the controversy surrounding Derivatives, courts held these instruments were not securities, therefore, could not be regulated as such.³ To solidify their existence even further, Congress amended the Securities Act of 1933 in the Graham-Leach-Bliley Act to exclude non-security based swaps (swaps are the most common type of Derivative contract) from the definition of a security.⁴ Finally, Congress went even further to resolve any question as to the legitimacy of Derivatives when it enacted the Commodity Futures Modernization Act of 2000 (CFMA) which provided for legal certainty for these off-exchange traded contracts, prevented the SEC from regulating security-based swaps, and settled the issue as to who would regulate this largest sector of the Futures industry.⁵

The purpose of this paper is to (1) trace the beginnings of commodities and the origins of the Futures & Options markets, (2) explain the foundational function of *Hedging* and the market participants engaged in this risk management activity, (3) elucidate the historical oversight of the *exchange traded* Futures Markets, as well as its overseer, the Commodity Futures Trading Commission, (4) highlight the strategies that risk managers use to transfer price exposure onto the Futures & Options markets, and (5) summarize the recent proliferation of *off-exchange* traded Swaps, Hybrids, and other financial futures contracts known as *Derivatives* as well as the political battle to keep these highly leveraged and powerful instruments virtually unregulated.

I. ORIGINS OF COMMODITIES, FUTURES, & OPTIONS MARKETS

From the foundations of the world, the importance of basic commodities to man's survival is self-evident. However, since Futures markets have their origins in the underlying cash commodities markets, a brief view of commodity history is essential to our query.

Commodities have always been a medium of exchange and a store of value since the beginning of time. Of course, commodities were the original currency before coin or paper currency came into existence. In fact, some of the oldest references to commodities are found in the Bible. Gold is the first commodity specifically mentioned in Genesis, the first book of the Bible.⁶ A few chapters later, the Bible records that Abram was rich in Cattle, Silver, and Gold.⁷ A few hundred years later, Joseph was appointed by Pharaoh as the government's chief commodity trading advisor of Egypt for the task of storing up (buying) wheat for a seven year period.⁸ At the end of the seven-year-government-enforced-storing-up-program, wheat was later sold (exchanged) for money, livestock, and land during the next seven years of famine which ultimately led to Egypt becoming the wealthiest nation in the region.⁹

Interestingly, these four commodities mentioned in Genesis (Gold, Silver, Cattle, and Wheat) are now all actively traded Futures contracts. Furthermore, petroleum based products were available (from oil seeps¹⁰) and used during the biblical era.¹¹ Likewise, petroleum products have thriving Futures contracts today trading in Crude Oil, Heating Oil, and Unleaded Gas.

After Egypt lost its prominence, along came the Phoenician, Babylonian, Persian, Greek, Roman, and Byzantine empires which gained notoriety as sources of economic power during consecutive periods of world history.¹² The Greek and Roman markets originated some today's modern trading characteristics such as fixed trading times, trading places, and cash

contracts for future delivery. After the fall of the Roman Empire, the feudal system that arose dampened the growth in the exchange of goods across Europe.¹³ Since feudal manors strived for self-sufficiency, they were not active merchant traders.

By the 12th Century, the northern cities of Italy, Venice, Florence, Genoa, Pisa, and Milan all sought to expand trade with the Orient and other regions of Europe.¹⁴ During this same era, northern Europe's trading epicenter was located in a region called Flanders which is now modern Holland and Belgium. In the year of 1114, the Counts of Champagne organized "trade fairs" to encourage trading activity and they collected fees for organizing these events.¹⁵ These market fairs became very popular across Europe and traders even came as far as Russia to attend. Later, these trade fairs were held on an annual basis and often rotated to other cities that specialized in one or two commodities.¹⁶ The trade fairs ended with merchants settling up their agreements made during the fair and fulfilling other previously made obligations. However, (as in any marketplace where participants enter into contracts with one another) trading disputes often arose between the traders. Therefore, a code of commercial law slowly developed and became known as "*law merchant*".¹⁷ Traders who violated this code could be taken before "courts of fair" in which other merchants would hear the dispute and decide the case accordingly. As early as 1154, a law of Milan established *consuls mercatorum* (consuls of merchants) where a group of merchant men settled disputes between the Italian traders without outside legal action.¹⁸ The courts of fair over the next few centuries became known as "exchanges" and in 1570, the Royal Exchange opened in London.¹⁹

As advanced as the commodity markets became in London, the first organized Futures trading in a commodity actually occurred in Japan during the 1600's. In Japan, Futures

contracts in rice (called “rice tickets”) were first traded between wealthy landowners and the feudal lords.²⁰ Interestingly, many of the basic rules governing the Futures trading in rice were the same as the rules governing Futures trading in the United States today. However, one difference was that the “delivery” of cash rice was not permitted in conjunction with the Futures contract.²¹ In 1869, this “no delivery feature” aspect of the Futures contract caused such erratic price discrepancies between the cash price of rice and the Futures contract in rice that the Imperial Government of Japan halted trading in rice Futures.²² Grudgingly, two years later, the Imperial Government reopened trading in rice Futures but allowed physical delivery of cash rice to occur at the expiration of the Futures contract which eliminated the market instability of prior years.²³

In the United States, as New York City was developing into the financial capital for the securities markets, Chicago was simultaneously becoming the preeminent city for the commodities markets. When the Erie Canal opened in 1825, people from New York, Pennsylvania and other cities flooded into the fertile farmlands of northern Illinois and southern Wisconsin.²⁴ A distinguishing characteristic of this unsettled rural area along the banks of Lake Michigan were the numerous wild garlic plants of the plains. Thus this place was christened as *Chicagou*, “the wild garlic place”.²⁵ In 1838, the first grain elevator was built in Chicago for the purpose of storing wheat which was increasing in trade throughout the area.²⁶ During these early days, wheat and flour were the main exports but trade was also developing in beef, pork, and wool.²⁷

As the grain trade blossomed over the next decade, eighty-three men came together in 1848, with the purpose of forming an institution that would aid in the city of Chicago’s development while also improving the infrastructure (canal, harbor, railroads, storage

facilities, roads, etc.) to sustain the ever-growing commodities trade. The Board of Trade of the City of Chicago was formed and it adopted both a constitution and by-laws in that same year.²⁸ The “founding fathers” of the newly formed Board of Trade were merchants and businessmen who sought to eliminate their dependence on eastern capital and establish a banking system that would be inter-connected to their organization.²⁹ Hence, the Board of Trade became the dominant middlemen between wheat farmers and livestock producers of the plain states and the ultimate consumers of these products who were located on the eastern coasts of the United States and across the Atlantic Ocean in Europe.³⁰

Immediately after its formation, the Board of Trade helped draft legislative banking bills as well as other state legislation that allowed their incorporation in the state of Illinois.³¹ Another feature of this legislation was a provision that gave the merchants of the Board of Trade jurisdiction over their own affairs in a “self-regulatory manner” which was previously contrary to state law.³² It appears that the founders of the Board of Trade were very familiar with *lex mercatoria*, or the “*law merchant*”, which was the legal tradition that existed among Mediterranean merchants of the Middle Ages, under the feudal system of England, and during the Renaissance of Europe.³³ This private system of mercantile law came into existence for the purpose of facilitating commerce and trade. At the heart of this “*law merchant*” were the validity of bills of exchange and the proposition that informal agreements could be legally binding.³⁴ Another important tradition was that rulings were to be made by other merchants familiar with the mercantile customs and *not by judges and courts*.³⁵ The Guilds of the Renaissance became the model for boards of trade and chambers of commerce that would later develop in the English Colonies. After the Revolutionary War, some state governments

made provisions for retaining and continuing the operations of these commercial-like institutions.³⁶

By 1854, Chicago had replaced New Orleans as the largest exporter of commodities to the East Coast.³⁷ A few years later in 1859, the Board of Trade of the City of Chicago received a new charter from the Illinois legislature that remains mostly in effect to this day.³⁸ This new charter gave strong regulatory powers to the Board of Trade which would permanently secure its survival. It had three new empowerments that went much further than the original act of incorporation. Under the new charter, the Board of Trade could (1) establish rules for their grain business “as they may think proper”, (2) the Board of Trade itself would settle all disputes and any arbitration award contained the same authority as “if it were a judgment rendered in the Circuit Court” and (3) the Board of Trade exclusively had the power to appoint grain inspectors and the right to develop the standards of weights and measures of the contracts that would be traded.³⁹

Shortly thereafter, “grain receipts” (just like the commodity itself) would be traded among the merchants because it was much easier to transfer possession of the receipts instead of moving thousands of bushels of wheat after each trade. These paper receipts would become a kind of legal tender which was “an embodiment of ownership, formalized business obligations and duties, as valuable as any commodity itself”.⁴⁰ Because of the standardization and enforced grading system, counterparties began to trade contracts on the basis of quotations *without actually receiving or delivering the product*. Although today they are known as “futures contracts”, in the 1850’s they were called “*to-arrive contracts*”.⁴¹ These “to- arrive” contracts were strikingly similar to the medieval “*letter de faire*”.⁴²

As futures trading became more prevalent, many participants noticed how the huge erratic price swings from the peaks of planting season to the extreme lows of harvest seemed to be smoothed out. In other words, active futures trading had reduced volatility between planting and harvest seasons as more speculators took the opposite side of positions from the hedgers.⁴³ Some attributed this phenomenon to a much greater number of participants in the market (commercials, farmers, hedgers, and speculators) than what there had been in the past (others still debate this claim today). More importantly, now lenders were encouraged to make more capital available for increasing grain production because it was now possible to shift some of the price risk away from the producer and onto the futures market. Thus the concept of “hedging” was born where traders entered into “hedges” out of a desire to avoid risk, not assume it.⁴⁴

Another type of time contract that soon developed was called “Privileges” which are recognized today as *Options (or Puts and Calls)*.⁴⁵ However, these *Privileges (Option contracts)* were very controversial. Therefore, when federal regulators threatened to abolish futures trading altogether in 1865, trading in privileges was banned (for over 100 years) by the Board of Trade as a compromise.⁴⁶

History books are replete with many advantages that the North had over the South during the Civil War. However, rarely has the Chicago Board of Trade received any acknowledgement for its contribution during the Civil War. While the Confederate soldiers barely had enough to get by and had to rely on meager amounts of maize meal and dried peanuts (goober peas) for subsistence, it is a little known fact is that the Union Armies had access to the nutritious grain products of Chicago and the meat supply of the Chicago Stockyards.⁴⁷

The beginning of the Civil War also brought about one of the first great speculative opportunities in futures trading. The commodity was Oats. Oats were in great demand because of the need to feed the horses of the Union Army. In 1861, the price of Oats was about 16 cents a bushel. However, just two years later, the price of Oats had risen to 72 cents per bushel, a 450% increase.⁴⁸ Consequently, speculators begin to see the commodity futures market as a vehicle for achieving outstanding returns (for those who could afford the risk) even eclipsing those returns of the stock market.⁴⁹

In 1865, the Board of Trade passed its first margin rule which allowed margin funds (earnest money) to be posted if demanded by either party but not to exceed ten percent of the value of the futures contract to be bought or sold.⁵⁰ Unlike our modern era where the exchange is the counterparty, the counterparties of that era arranged their own settlement with each other.⁵¹ Today, margin requirements exist as each exchange determines the amount of margin money required to be deposited for the commodities traded on its exchange. The legal term for margin requirement is “performance bond”. Most margins requirements range from 5 to 10% of the contract value but each exchange has the ability to increase or decrease margin requirements depending on market volatility, news events, or any other circumstances necessary to protect the financial integrity and stability of the exchange. The margin requirement system is what allows for immediate flow of funds to and from the trading accounts of the market participants (i.e. from the losers to the winners).

After the Civil War, the concept of the trading pit was first created to deal with multiple participants in an overcrowded room.⁵² These newly designed octagon-shaped, stair-stepped, recessed, platform allowed traders to easily see one another and thus trade could proceed in a more effective manner.⁵³ These trading pits still survive today on most exchange floors.

In 1871, the Great Chicago Fire destroyed much of the city of Chicago including the Chamber of Commerce Building where the Board of Trade was located.⁵⁴ After the fire, a committee was appointed to deal with the settlement of all outstanding trades and to collect and pay the difference on these trades. This was the first time the word “clearinghouse” had been used. This clearinghouse committee became the forerunner of the exchange clearing house which would be created some fifty years later which ultimately turned out to be one of the most important forces in preserving the integrity of futures trading.⁵⁵

As trading in futures continued to blossom into the late 1800’s, the Board of Trade would have to deal with image problems as some of its members tried to occasionally “corner the market”. There were other legal battles as grain transportation was taken over by the railroads.⁵⁶ Furthermore, new technology also created problems for the Board of Trade. After the invention of the telegraph and its subsequent use for transmitting quotes prices from the exchange trading floor to the outside world, “bucketshops” soon developed.⁵⁷ Bucketshops were establishments where people would gather to place wagers on the price quotations from the commodities and stock market trading floors. However, these bucketshops and their speculators were unlike the exchange traded brokerages and speculators of today. They served no economic purpose nor did they provide any market liquidity since the trades were matched within the bucketshop (for a fee) and *were not executed on the trading floor*.⁵⁸ Many of the bucketshops added the word “exchange” to their company name which gave some the impression that they were affiliated with the actual exchanges.⁵⁹ For as little as a \$10 wager, one could enter into a trade without really having any understanding of the underlying market (or understanding that risk was not limited to your original investment).⁶⁰

As the public became more outraged with this type of gambling, it clouded the perception as to the legitimacy of the real exchanges that traded in contracts for future delivery. When the bucketshop losers and the public at large began to condemn this type of gambling, they often included the exchanges in their unfavorable rhetoric. Therefore, the exchanges petitioned the courts to have the telegraph companies terminate providing quotes to the bucketshops claiming this would end the exploitation and pirating of price quotations.⁶¹

In 1889, the Illinois Supreme Court gave the Board of Trade a very unfavorable ruling by holding that the Board could not restrict the price quotations to exclude certain groups.⁶² However, the ruling would not prevent the Board of Trade from discontinuing all price quotations completely if it so desired. Unfortunately for the Board of Trade, elimination of all price quotations (just to destroy the bucketshops) would also severely cripple the trading activity of its own members who had grown accustomed to receiving the market price quotes via the telegraph at several locations all across the country.⁶³ In addition, the exchange's own members began having economic relations with the bucketshops that made it even more difficult to force them out of business.⁶⁴ Many years later, states would pass their own laws that would limit or prohibit the activities of the bucketshops. However, the telegraph and its "ticker" proved to be such a valuable technological innovation that the exchanges could not do without it despite the new problems that technology created.⁶⁵

Other Exchanges soon came into existence so the Board of Trade was no longer the only game in town. The Chicago Butter & Egg Board was founded in 1898 and was the forerunner to the Chicago Mercantile Exchange (CME) of 1919.⁶⁶ In December of 2002, the CME became the first exchange to become a publicly traded company.⁶⁷ Also, a group of dairymen

formed the Butter and Cheese Exchange in 1872 which still survives today as the New York Mercantile Exchange (NYMEX) where the Energy Products and Metals are traded.⁶⁸

During the 1970's, the Chicago Board of Trade (CBOT) began to lose trading volume as the Chicago Mercantile Exchange (CME) had just introduced new futures contracts on Pork Bellies, Live Hogs, and Live Cattle. This move into perishable commodities was a bold move for the CME. However, many industry watchers were completely bewildered when the CME under the leadership of Leo Melamed (with the influence of Dr. Milton Friedman) would introduce currency futures to the world.⁶⁹

Before currency futures appeared on the scene, Dr. Milton Friedman, tried to sell short the British Pound in 1967. However, the Chicago banks refused insisting they only dealt with institutions and not individuals.⁷⁰ At that time, Dr. Friedman was an economic professor at the University of Chicago. He believed that the Bretton Woods system of fixed exchange rates would soon come to an end and that the British Pound would be devalued.⁷¹ In 1945, the Bretton Woods currency exchange rate system was organized to establish rates between the world currencies where everything was fixed off of the dollar. Friedman believed that fixed exchange rates could no longer exist in a globalized world where information was flowing at a much faster pace than ever before. Furthermore, he believed that the marketplace would take the lead in price discovery as opposed to some finance minister or central bank.⁷²

During this time, Leo Melamed (who would later become chairman of the CME) approached Dr. Friedman with his idea of currency futures. With tears in his eyes, Dr. Friedman told him, "It is a wonderful idea and it is exactly what we need".⁷³ Melamed asked Dr. Friedman if he would put this concept in writing so that he would have something which showed Milton Friedman supported the idea of currency futures. In recalling the conversation

during an interview, Melamed reported that Dr. Friedman told him to “remember that he (Friedman) was first a capitalist”. Melamed then ask Dr. Friedman, “How much”? Dr. Friedman replied, “\$5,000.” Melamed responded, “Done”.⁷⁴ So for \$5,000 the Chicago Mercantile Exchange received a feasibility study on why the world could use a currency futures market to trade currencies.⁷⁵ A few years later, Dr. Milton Friedman would receive the 1976 Nobel Prize for economic science, albeit not for currency futures but for his work on the importance of the quantity of money as an instrument of government policy and as a determinant of business cycles and inflation.⁷⁶

In hindsight, Currency Futures seemed exactly what the markets needed as the Gold Standard was eliminated in 1971.⁷⁷ Prior to that, the dollar had been convertible into Gold. Elimination of the Gold Standard would mean that the value of the dollar would be allowed to float against other foreign currencies. While the CME geared up for Currency Futures, the CBOT was on its way to developing Interest Rate Futures contracts. In 1975, the CBOT became the first exchange to launch a futures contract where financial institutions could hedge interest rate risk. The first interest rate contract was a mortgage futures contract called the “Ginny Mae” and because of it (for the first time in history) the seat price on the Chicago Board of Trade would exceed the price of a seat on the New York Stock Exchange.⁷⁸ Thereafter, the Treasury Bonds (which appeared on the scene in 1977) would become the CBOT’s most successful futures contract.⁷⁹ In 1981, the CME would introduce T-Bill and Eurodollar Futures contracts (not to be confused with the Euro Currency that was introduced in 1998). The Eurodollar is a short-term (90-day) Interest Rate Futures contract which is tied to the rate that banks pay for U.S. deposits in overseas banks. Since Eurodollars were U.S. dollars in overseas banks, they had a little more premium and much more volatility than

Treasury Bill Futures. Eventually Eurodollars would become the most heavily traded futures contract ever.⁸⁰

In 1982, the CFTC slowly began to allow “options” to trade under a pilot program which ultimately led to the acceptance of options trading on almost every commodity.⁸¹ Commodity Options are very similar to stock options in that there are “put” and “calls” at different strike price levels on a variety of contract months. A “put” option gives the option buyer the right, but not the obligation, to have a *short* futures position at a certain strike price. Therefore, a purchaser of a “put” option makes money when the underlying market declines especially when the market drops below the strike price. In contrast, a “call” option gives the option buyer the right, but not the obligation, to own a *long* futures position at a certain strike price. Therefore, a purchaser of a “call” option makes money from a rise in the underlying market, especially when the market rises above the strike price.

What makes options trading very popular is because in both put and call scenarios (where the option is initially purchased), the maximum risk of loss is limited to the cost of the option, commission, and fees. However, profit potential is “unlimited” at the level of the strike price. When options are purchased, this purchase price is called “the premium”. There are bid/ask spread on options very similar to stock and futures quotes in which market participants (by their trading) determine what the premium will be. Factors such as the strike price level as compared to the underlying contract, time to expiration, market volatility, and market expectations are constantly analyzed by market participants and those variables affect option pricing. However, since there are multiple strike prices on puts and calls ranging over many contract months, options typically do not have the liquidity that is prevalent in the underlying futures contract.

In 1982, the Kansas City Board of Trade (KCBT) developed the world's first stock index Futures contract which was on the Value Line Index. However, the CME came out with the S&P 500 Futures contract a few weeks later which became the model for all Stock Index Futures contracts. This was the first time traders could use a Futures contract to hedge their stock portfolios or to leverage money into the stock market without having to buy the individual stocks. Another milestone in equity indexes came in 1997 when the CBOT began trading a Futures contract on the most famous stock index in the world, the Dow Jones Industrial Average.⁸² In addition, the exchanges developed "mini-sized" contracts (both S&P and DOW) which operate off the same indexes but the S&P e-mini is 1/5 the size of its normal contract while the mini-Dow is 1/2 the size of its normal contract value. These mini-contracts allow smaller capitalized investors the ability to enter into these transactions. Today, stock index futures trade around the world on almost every futures exchange in the world.

Electronic trading has been slow to replace the trading pits of the futures markets, partly because futures just do not have the magnitude of trading that the stock markets enjoy. The floor trader still provides a vital role in keeping markets liquid and most likely will not be replaced anytime soon. However, in the very active contracts of the S&P 500, Dow Jones, Nasdaq, and Interest Rate Futures, electronic trading has continued to grow. However, electronic trading is extremely dangerous since some contracts are not cash settled and longs are subject to delivery after first-notice-day. Spot months in some commodities are very illiquid and carry much higher margins in the last 30 days of trading because they can be "squeezed" (where large moves occur for no reason except for fear of losses as futures contracts must be liquidated prior to expiration). The learning curve in Futures, Options, and

risk management in general is much more complicated (and costly) for the novice than any other type of trading or investing. Therefore, the prudent investor or risk manager should be very cautious before “jumping into the fray”. In addition, one should be wary of anyone claiming to know the future direction of a particular futures or stock. Insiders in the financial industry are well aware that more 80% of all traders (including investment professionals) will eventually be wrong in the final analysis because of several common mistakes. However, because 20% of those who win, win big, traders of all shapes and sizes are continuously attracted to these markets.

II. HEDGING: THE FOUNDATIONAL PURPOSE OF THE FUTURES MARKETS

In theory, Commodity Futures are basically “publicly traded forward contracts.”⁸³ Cash forward contracts still survive today in many commodities. For example, a forward contract (also called a cash contract) would occur when a wheat farmer enters into a pricing contract with a grain merchant or miller. Assume that a farmer had just planted his seed wheat in the fall but his wheat crop will not be ready for harvest until summer. A cash forward contract may be drawn up between the farmer and the grain merchant. Even though the wheat had just been planted and harvest was more than six months away, the contract would provide that the farmer deliver his wheat crop to the grain merchant, specifying a certain number of *bushels*, of a certain *quality*, on a certain *date*, at some specified *price*. Because this contract “locks in” a specific, agreed-to-price, the farmer foregoes any opportunity to participate in higher prices (which benefits the grain merchant) should the wheat market continue to rise into the summer harvest. If, however, the price of wheat moves lower into harvest, then the farmer would benefit from the cash contract (to the detriment of the grain merchant) since the previously negotiated price was higher. In both scenarios, the farmer brings his wheat to the

grain merchant shortly after it is harvested thus “delivering” the quantity of bushels as provided for in the contract.⁸⁴

Basic contract law principles apply as the farmer looks to the grain merchant for performance of the contract (payment for delivering the wheat). Likewise, the grain merchant looks to the farmer to perform in accordance with the terms of the contract (delivering a certain number of bushels, of a certain quality, by a certain date). However, suppose the price of wheat doubles or even triples by harvest time. The farmer may be tempted to default (fails to deliver the wheat to the grain merchant) and just sells the wheat to someone else at the existing market price, thus breaching his contract with the grain merchant in order to get the higher price on the spot market. Now, the grain merchant will still need the wheat after harvest because most likely it will have other contracts to fulfill with flour mills to deliver wheat during that time. Therefore, the grain merchant may be forced to buy wheat on the open market at the higher price to make good on its other contracts and later sue the farmer for damages incurred due to the farmer’s breach (failure of the farmer to deliver wheat at the previously agreed price).

This opportunity for breach is referred to as “counter-party risk” which is present when two parties enter into a contract. Likewise, the farmer has counterparty risk because if the price of wheat drops precipitously, then the grain merchant may be the one tempted to breach (especially if they had guessed wrong on the market direction and failed to lay off this risk by offsetting cash contracts with flour mills or other end users of wheat). Law students (in first year Contracts) learn that many breach of the contract cases occur during times of rapid price inflation and deflation in the economy. Large price moves (in either direction) catch many market participants off-guard which in turn causes extreme financial repercussions to the

contracting parties. This counter-party risk (i.e. failure of one party to perform) is the most often underestimated risk component of any transaction, especially when the contract involves the price performance of a commodity or futures market.

One of the benefits of using *exchange traded futures contracts* (rather than cash forward contracts or off-exchange Derivatives contracts) is that *the counter-party is now a U.S. Commodity Exchange* as opposed to an individual or corporation. The exchange acts as a buyer for every seller and a seller for every buyer on each transaction. This significance becomes apparent as the Chicago Mercantile Exchange (CME) declares in a recent brochure highlighting the financial safeguards of their exchange, “*In the 100-year plus history of the CME and its predecessor organizations, there has never been a failure by a clearing member to pay settlement variation to the Clearing House; there has never been a failure by a clearing member to meet a performance bond call; there has never been a failure by a clearing member to meet its delivery obligations; and most importantly, there has never been a failure of a clearing member resulting in a loss of customer funds.*”⁸⁵

While the Futures markets originated with grain contracts in the mid-1800’s, it wasn’t until the 1970’s when they first expanded into “perishable” commodities such as cattle and hogs. Now, livestock producers could participate in the Futures markets to lock in prices and eliminate the disadvantages of cash contracting as well. A cattleman wanting to hedge a cash position would first determine the futures contract month corresponding to the month the cattle are to be sold. For example, a cattleman who grazes stocker cattle on wheat pasture from November to March would *sell* a March Feeder Cattle Futures to lock in the price of the cattle. Since he plans to sell the cash cattle sometime in March (assuming he is satisfied with the current price of the March Feeder Futures contract), he would then call his broker and sell

the March Feeder Cattle Futures. Additionally, the cattleman would need to determine how many contracts were needed and simultaneously post the equivalent margin deposit as required by the Chicago Mercantile Exchange (which is the exchange that trades Feeder Cattle). Each futures contract has a “contract size” that is very important in determining how many contracts will be needed in the transaction. Since, Feeder Cattle has a contract size of 50,000 pounds (assuming the cattleman plans to sell cattle that weigh approximately 750 pounds), then each contract would cover about 66 head ($50,000 / 750 = 66.6$ head per contract). The next step would be to take the total number of cattle he desired to hedge, divide that number by 66 head, and then sell an equivalent number of contracts. Regardless of the contemplated Futures contract, a hedger should always begin by looking at the contract size to determine how many contracts are needed.⁸⁶

Now, once the hedge has been placed through the broker and the trade executed on the trading floor, then the broker should immediately “report the fill” (execution price) to the client. Thereafter, if the futures markets rallies (which means that the futures position is incurring losses) the clearing firm will require the cattleman to post extra margin if he wants to maintain the positions. If we skip to the time that the cattleman sells his cattle in March, then he should simultaneously exit the futures position by buying it back. If the futures position generated a loss, most likely that futures market loss will be offset by his receiving a higher price in the cash market for the cattle. However, suppose the futures market dropped right after placing the hedge when he initially sold the futures and continues to drop until the time when he sells the cattle in March. Under this scenario, money would flow into the futures account and these funds would be used to offset the losses that would be sustained in the cash market. Surprisingly, in both of these scenarios, the net result would be roughly the

same. However, emotions usually differ with each result because when the market rallies, the cattle hedger would have been better off had he not placed the hedge and therefore many first-time hedgers mistakenly interpret hedging losses as “profits given up”.

Yet, in the scenario when the hedger guessed right (placing hedges before the market dropped) the hedger is very proud because, had there been no hedges, there would have been no futures profits to offset the losses sustained by the falling cash market. Again, in both scenarios the net result is virtually the same. At the conclusion of the hedge, the cattleman would still take his cattle to market when they are ready to sell and then simultaneously call his broker to offset the futures hedge. Although the cash and futures transactions mirror one another, they still are separate and distinct transactions (with separate parties) with their own respective obligations. However, frequently when a bank is financing the cattle operation, the lender may require under the loan agreement that the cattlemen hedge some percentage of the cattle. While risk management strategies are infinite with varying degrees of risk and reward, this is the foundational premise for most hedging activity regardless of the underlying commodity.

Futures Markets were also designed to allow “commercials” (large grain merchants) to fulfill their hedging needs and purposes. A commercial hedger might employ a “long hedge”. This would occur when one would “buy” the futures contract to lock in the price. For example, a grain processor who needs to purchase wheat to grind into flour will need to procure cash wheat to fulfill its obligations to merchandisers or retail stores. If the grain processor begins to fear that wheat prices will rise and wants protection from higher wheat prices (which would increase input costs), the grain processor may decide to buy wheat futures and lock in some amount of their future needs. In all of these transactions, hedgers

using the futures have the ability to determine what percentage they want to hedge and they also have the ability to determine how long they want to hold onto the hedge (not exceeding the end date of the contract). However, there is no requirement to hold the hedge all of the way to expiration of the futures contract. In fact, many producers engage in what is called “spec-hedging” which means they are hedging, but if the futures market goes in their favor by an acceptable amount, then they will take their profit and move back to a neutral or “un-hedged position”. This is where the term “spec” is used which is short for “speculation”. Now, if options are combined into the hedging strategies by using puts, calls, fences, strips, butterflies, synthetics, etc., some very complicated but yet potentially unlimited strategies (with varying degrees of risk/reward over a multitude of time horizons) can be used.

Livestock producers, grain producers, agricultural commercial firms, energy companies, and other hedgers (remember hedgers are those who own or expect to own the underlying commodity) are not the only one who use Futures. Small and large speculators, commodity funds, floor traders, hedge funds, mutual funds, professional money managers, banks, and other financial institutions also participate in buying and selling Futures contracts depending on their market outlooks, trading objectives, risk management plans, time horizons, and availability of risk capital.

Now, even though hedging was the initial purpose that led to Futures trading, the market does not know (nor does it care) if the underlying cash commodity is owned by either of the parties in a Futures transaction. The fact that the trader may own the underlying cash commodity is what classifies one as a “hedger”. Yet, it is just as likely that on any given transaction that both buyer and seller are just speculators looking to make a profit. Without speculators actively participating in the Futures Markets (which adds volume and liquidity)

there would be larger swings in price and a greater gap in the bid/ask spread. However, without the purpose of hedging (which provides the basis of any market in the first place) speculators would not have a financial opportunity to participate in this quest for price discovery.

It is beyond the scope of this paper to argue in support or against speculation, but it should be noted that speculators come in all shapes and sizes with differing goals, objectives, time frames, and availability of trading capital. Many speculators are simply small investors who engage in trading with limited investment dollars which is often referred to as “*trading with scared money*”. These small traders usually end up losers but on a day-to-day basis provide additional liquidity for the market. However, speculators can also include large commodity funds (similar to mutual funds), hedge funds (hedge funds not really hedgers per se but are an unregulated type of large money managers who trade for wealthy and high risk adverse clients), or just very wealthy individuals who “like the action”. The lines between hedging and speculating become blurred as many financial institutions and corporations have active trading programs in the markets that affect them. These “spec-hedgers” will actively trade in and out of a Futures market after covering short-term positions that hit certain profit objectives or when a market exceeds certain loss parameters. In addition, Options are frequently used (similar to an insurance policy) to protect against declining or rising prices or in conjunction with Futures contracts to limit risk exposure.

Another reason speculators flock to the Futures markets is because of the concept of *leverage*. Leverage is “razor thin” in the Futures markets. In the U.S. Equities markets, the Federal Reserve sets rates for margin accounts under Reg T which almost never changes.

Reg T (currently at 50%) means that if an investor buys \$10,000 worth of stock, a minimum of \$5,000 must be posted by the investor for a margin account. Moreover, the investor must borrow the remaining 50% from the Broker/Dealer and interest is charged on that loan. However, margin rates for Futures markets are determined by the exchange on which the underlying contract trades. Depending on market volatility, the exchange has the right to raise or lower the margin requirements at anytime. Some contracts with lower volatility have margin requirements as low as 5% of the contract value while extremely volatile contracts may have margins as high as 20% of the contract value (or in the case of security futures where the margin is set at 20%). Although on average, a typical Futures contract will have a margin requirement of 5 to 10% of its contract value but the Exchange does not charge interest on the remaining balance like a Broker/Dealer does on stocks purchased on margin.

Since the ramifications of leverage are not fully understood by the investing public, it is widely accepted that trading in Futures is riskier than stocks. To the contrary, both markets are very equal to each other in terms of volatility and yearly percentage gains or losses. However, most Futures traders fail to respect the impact of leverage and how this leverage can be a “double-edge sword”. Since margin requirements are much lower for Futures than with stocks, most traders will initiate too many positions because an equivalent amount of trading capital will allow up to 5 to 20 times more market exposure with futures than an equivalent stock position. This is another important reason that a Futures trader should first determine margin requirements and compare it to the contract value since this is critical to properly evaluating leverage and its impacts on potential profits and losses.

Unlike the stock market, Futures trading is a “zero-sum game”. This means that for every winning Futures position there is a loser and for every losing Futures position there is a

winner. In absolute terms, money is not created or destroyed through trading, it is merely *transferred*. Another distinguishing characteristic of the Futures markets is that it is very easy for a trader to initiate a short position (“sell short”) when one suspects a market may decline (unlike the stock market, there is no “down-tick rule” in Futures).

Each Futures exchange itself acts as a buyer for every seller and a seller for every buyer. The exchange’s clearing house not only clears all of these trades but also collects funds each and every day (through the process of the initial and maintenance margin call requirements) from the losers to pay to the winners. In Futures, these positions (and subsequent change in account balances) are “marked to the market” which means funds are credited or debited to each account on a daily basis. Therefore, existing profits that have not been realized (by an offsetting transaction) are still available in the account to withdraw or can be used to margin other positions. However, margin calls must be met immediately if losses cause the account balance to fall below the minimum margin requirements.

In most Futures markets, the trading pits (which are as old as the markets) still exist. This method of trading is called “open outcry” where floor traders use a flurry of hand signals coupled with intense screaming and yelling at one another as they execute the trades in the pit. What looks like chaos to the average person is in fact a very orderly, methodic way of trading Futures and Options. Thousands of contracts trade on a daily basis as the market reacts to a variety of factors on its never ending quest of “price discovery”. Price quotations run out into future months (some commodities like interest rates extend several years into the future). For example, in Crude Oil, a Futures market exists for every contract from January through December. However, in the Interest Rates, Currencies, and Stock Indexes, the Futures contracts are traded in the quarterly months of March, June, September, and December. Other

Futures contracts have their own specifically designated contract months that are unique because of harvest, past trading volume, or some other market reason.

In conclusion, as Futures trading developed, bankers became willing to make more capital available to farmers if they “hedged their outputs”.⁸⁷ In fact, some bankers were willing to loan up to 100% of the value of a commodity on the basis of a contract for future delivery.⁸⁸ This is still true today except that now livestock, energy, and financial industries are able to hedge price risk allowing them more favorable terms with their lenders as well.

III. REGULATION OF THE COMMODITY FUTURES INDUSTRY

Regulation of the Futures Industry was under the domain of the states until Congress passed the Grain Futures Act of 1922 which was signed into law by President Warren Harding.⁸⁹ The Grain Futures Act (which predates the Securities Act of 33 and the Securities Exchange Act of 34) gave the United States Department of Agriculture (USDA) the power to regulate the Futures market.⁹⁰ Of course, the exchanges were not happy about this new federal regulatory intrusion into their self-regulated territory. A few years later, William Jardine, Secretary of Agriculture, threatened the Chicago Board of Trade (because of the allegations of market corners and manipulations of past decades) by declaring that if the Board of Trade did not clean house, then the USDA would put them out of business.⁹¹ Investigations into erratic market behavior by large professional speculators caused a newly created agency of the USDA, the Grain Futures Administration, to request detailed information of the existing positions of some of the largest traders at the Board of Trade.⁹² Several members did not initially comply with filing these new reports but eventually submitted to the authority of the new regulatory body.⁹³

This tension between the new federal regulators and the Board of Trade, led to the creation of a new entity called the Board of Trade Clearing Corporation (BOTCC) as well as a new business conduct committee at the Board of Trade. However, even though the Board of Trade eventually succumbed to governmental pressure for the new organization and committee, they fought unsuccessfully for the reinstatement of trading in “Privileges” (now called Options).⁹⁴ Since 1926, the Board of Trade Clearing Corporation (BOTCC) has remained an integral part of the market infrastructure as it has successfully minimized the nonperformance risk among futures market counterparties, even though it has lacked the prominence and visibility of the Chicago Board of Trade itself.⁹⁵

In 1936, Congress enacted the Commodity Exchange Act which likewise was enforced by the United States Department of Agriculture until 1974.⁹⁶ In the 1970’s, futures contracts began expanding into non-agricultural markets such as metals, petroleum, financials, and currencies market. Therefore, Congress recommended that an all-purpose agency be created to oversee both the traditional and expanding non-agricultural commodities. This new agency was christened, the “Commodity Futures Trading Commission (CFTC)”.⁹⁷ Another important feature of this legislation was to broaden the definition of the word “commodities” so that the CFTC would have jurisdiction over the old and newer contracts. However, the CFTC had to refrain from using the word “securities” which would set off alarm bells at the Securities Exchange Commission which was very eager to regulate these emerging financial products.⁹⁸

Securities Law students are very familiar with the landmark Supreme Court case that provided the litmus test for determining if an investment contract was a security.⁹⁹ In *SEC v. W.J. Howey*, 328 U.S. 293 (1946), the Supreme Court coined the famous “Howey Test” which became the cornerstone for defining what investments were within the definition of a

security.¹⁰⁰ At first blush, it seems that a Futures contract would fall under this definition of a security. However, even before Congress created the CFTC, the issue whether commodities were a security had already been decided in the negative.¹⁰¹ In *Sinva, Inc. v. Merrill, Lynch, Pierce, Fenner & Smith, Inc.*, 253 F. Supp. 359 (SDNY 1966), the district court held that a commodity futures contract was not an investment contract because the purchaser did not gain a share in a common enterprise but is merely acquiring the power to exercise control over commodities and any expected return is not dependent upon the efforts of others.¹⁰²

After the CFTC came into existence in 1974, the issue of its jurisdiction was quickly challenged as well.¹⁰³ In *State of Texas v. Monex International Ltd. (Tex.Ct.Civ App. 1975)*, the State of Texas sought injunctive relief against Monex International for providing margin accounts for trading in silver coins; however, that relief was denied as the court decided the newly created CFTC was the federal regulator that had exclusive jurisdiction over the type of transactions at issue.¹⁰⁴ Later, the CFTC's jurisdiction was found to extend to interstate commodities transactions and thus the rules of other agencies did not apply.¹⁰⁵ *Trustman v. Merrill, Lynch, Pierce, Fenner & Smith* (CD Cal. Jan, 1985).

In 1981, the CFTC gave its approval for the National Futures Association (NFA) to become the self-regulatory organization (SRO) for the futures industry.¹⁰⁶ It was empowered by the CFTC as per §17 of the Commodity Exchange Act to maintain the integrity of the Futures markets and protect the public investor. However, unlike the NASD, the National Futures Association is not affiliated with anyone marketplace. Yet, the relationship between the CFTC and the NFA is very similar to the relationship between the SEC and the NASD (albeit on a smaller scale). The NFA performs several regulatory activities such as (1) auditing members to enforce compliance with NFA financial requirements; (2) establishing

and enforcing rules and standards for customer protection; (3) conducting arbitration of futures-related disputes; (4) performing screening to determine fitness to become or remain an NFA member.¹⁰⁷ Furthermore, the NFA is responsible for regulating Futures Commission Merchants (FCMs), Introducing Brokers (IBs), Commodity Trading Advisors (CTAs), and Commodity Pool Operators (CPO's).¹⁰⁸ However, the NFA has no direct authority over Derivatives dealers unless they are registered members (and most are not registered for this very reason).

In the 1990's, the Chicago Futures Markets challenged the Over-the-Counter (OTC) market in order to prevent them from developing *off-exchange* electronic trading platforms.¹⁰⁹ In *Board of Trade of the City of Chicago v. Securities and Exchange Commission*, 923 F.2d 1270 (7th Cir. 1991), the Chicago Board of Trade and the Chicago Mercantile Exchange were unsuccessful as they challenged the operation of an electronic share exchange as the illegal operation of a stock exchange.¹¹⁰ A brokerage firm, clearing firm, and a financial institution operated a computerized system which allowed those who were interested in buying or selling stocks or commodities could list their interests.¹¹¹ Once matched buy and sell requests were found, a trade would be executed. The SEC ruled this was not an exchange and the 7th Circuit agreed which paved the way for a plethora of "electronic share exchanges" also called "trading platforms" to evolve.¹¹² This decision would be the catalyst for increased trading volume in Derivatives which are Futures-type contracts traded *off-exchange* by institutions.

IV. BASIC RISK MANAGEMENT STRATEGIES FOR HEDGERS¹¹³

Risk Management has become the new buzz word for "Hedging", yet both these terms are still used interchangeably. Typically a "Hedger" is a person or entity that takes a Futures or Options position that "offsets" a risk in a concurrent "cash" market position. For example, a

natural gas producer (who has gas production coming in from wells each month) could take a Futures or Option position (or a combination of both) that would provide price protection should the market decline. In market jargon, we would say that the gas producer is “*long the cash*” and therefore would need to “*short the futures market*” to shift his price risk exposure onto the Futures Market. Notice how the price risk in the *long cash* is offset by the *short futures*, thus a “Short Hedge” occurs. Of course, the Hedger determines when to hedge, the percentage to hedge, the strategy, the timing, and selects from multiple strategies (each with differing levels of risk, reward, and margin requirements).

However, some smaller producers are not offensive in their trading programs but look at risk management from a more “defensive” perspective. In the Futures markets, *fear* drives many of the market participants (including Hedgers) into various trading situations, whether it is a fear of lower prices (thus prematurely *entering* new short positions) or a fear that margin calls will become too excessive to meet (thus *avoiding* the futures completely and just selling the cash product instead). Yet, while many panic during times of extreme market volatility, some of the larger firms are poised to capitalize on these opportunities as they stand ready to provide liquidity to the market during temporary periods of high volatility.¹¹⁴

Now, an entity that has negative price risk exposure *if the underlying commodity rises*, would be called a “Long” Hedger. To review, an entity that needs to avoid or minimize price *declines*, would be called a “Short Hedger”, while one who seeks to avoid or minimize price increases, would be called a “Long Hedger”. Even though the combinations of possible strategies are endless, there are several common risk management strategies used by all Hedgers today. Because of space constraints, this article will discuss several of these basic

risk management strategies from the view point of a “Short Hedger” who needs price protection from a declining market.¹¹⁵

SPECULATE ON CASH MARKET:

This first strategy is not really a strategy at all (although it could be viewed as the default strategy of doing nothing). Some commodity producers (who refuse to hedge) say that since they are always selling cash production at regular intervals, they will sometimes sell at market highs, sometimes sell at market lows, and sometimes sell in between. Therefore, they argue that the prices they receive throughout the year should average out in the end. Unfortunately, it was the failure of this strategy (letting the market dictate the price received at time of sale) that served as the catalyst for the development of cash forward contracts and subsequently Futures contracts that would allow producers to make pricing decisions well in advance of selling the underlying cash commodity.¹¹⁶

CASH FORWARD CONTRACT:

Now, the end result of a CASH FORWARD CONTRACT by itself is almost identical to the end result of a STRAIGHT HEDGE BY SELLING FUTURES (see page 32). The difference is that with a Cash Forward Contract, there is usually no initial margin deposit or subsequent margin calls made by the producer. However, if the market moves higher after the forward contract is in place, the end result is the same had margin calls been made anyway because there is no ability to participate in a higher market if prices rise after entering into a cash forward contract. Furthermore, cash contracts are usually quoted lower than the prevailing Futures Market price because the entity making the cash contract available to a producer needs to receive some profit for “making a market” in the forward pricing of the cash commodity. However, in a scenario where the market price drops precipitously, one of

the major concerns with a cash contract is, *CounterParty Risk*. This is a term which defines the *risk of default* if the market drops so much that the other party doesn't show up in the end to fulfill their end of the contract (i.e. receiving the cash commodity in exchange and paying the producer the agreed price). This happened to many producers in the energy industry in their dealings with Enron. Enron had many ventures, one of which was cash forward contracting with oil and gas producers. When Enron surprisingly collapsed, it defaulted on many of its cash contracts. When one party to a Cash Forward contract defaults, the other party with damages will need to seek legal representation to litigate the breach.¹¹⁷

BUYING CALL OPTIONS WITH CASH FORWARD CONTRACT:

Producers who enter into cash contracts and are willing to take the counterparty default risks should consider simultaneously BUYING CALL OPTIONS in order to participate should the underlying price of the commodity rise. Now, the cash contract itself provides the unlimited downside price protection. However, if the Call Option is also bought, the hedger will still be able to participate should the market keep moving higher. Of course, the hedger will pay a premium for this Call Option, but the loss from the option will be limited to its initial cost. Yet, the Call Option will provide unlimited profit potential at the strike price and above (minus the cost of the option).¹¹⁸

BUYING PUT OPTIONS:

Buying Put Options is one of the most basic foundational hedging strategies and essential for any risk management program. Buying a Put allows a "floor price" to be set in at the selected strike price while still allowing one to participate if the market moves higher (unlike the Cash Contract or Straight Futures Hedge). Buying a Put is a one-time expense which means the initial cost of the option is the only financial obligation. There will be no further

margin calls when an option alone is purchased. There are several strike prices available on each contract month. The closer the strike price is to the underlying futures contract, the more an option will cost. Again, the “floor price” gives the Put buyer unlimited profit potential at the strike price and below, while the maximum loss from the strategy cannot be more than the initial cost of the option. Some Hedgers buy cheap Put Options at their break-even-price to simply “hold their money together”. This strategy usually complies with a bank’s lending agreement which requires the borrower to use some form of risk management.¹¹⁹

STRAIGHT HEDGE BY SELLING FUTURES CONTRACT:

This is another basic hedging strategy and the one that has almost replaced the Forward Contract. When Selling the Futures, the Futures Price is locked in. Margin money must be deposited with the broker. This margin money is earnest money (good faith funds) that will be used to offset any losses in the account should the market keep rising. There is *unlimited risk if the market rises* and the position is subject to on-going margin calls that must be immediately met to keep the positions from being liquidated by the brokerage firm. However, there is also *unlimited profit potential to the downside in a declining market*. If the market drops, money immediately flows into the futures account even before the position is offset. There is virtually no Counter-Party Risk because the exchange is the other party to the transaction, not some person or small corporation like in a cash forward contract. Basically, Futures are really “exchanged traded forward contracts” that have been standardized so that all terms (contract size, grade, delivery, etc) are uniform and disclosed to all market participants. The Futures market gains or losses are then either credited or debited to the concurrent cash market transaction to complete the analysis of this risk management strategy.¹²⁰

THE WINDOW/FENCE: (BUYING PUTS / SELLING CALLS):

This strategy is rather complicated and is not suitable for the first time hedger. Basically, a floor price is set in at the strike price where the Put is bought. However, this strategy also requires that a “ceiling price” be set in somewhere above the current futures price which is done by Selling a Call. The advantage is the market will pay back some premium for setting in the “ceiling price” and this premium can be used to offset some of the purchase price of the Put. Because there is extra premium obtained from Selling the Call, a higher strike price on the Put might become more affordable when using this strategy. In other words, experienced hedgers use this strategy to set in a higher floor price because the Call that is sold offsets much of the cost of the Put. However, because of the “ceiling price” created from Selling the Call, initial margin money is also required (in addition to the cost of the Put). There is now unlimited risk above the Call strike price and additional margin calls will be required if the market moves higher.¹²¹

COSTLESS COLLARS (another type of WINDOW/FENCE):

Exactly the same as the Window/Fence, except that the Call Option that is sold is at or near the same price as the Put Option that is bought. Thus, the price of the protection nets out near \$0 (zero dollars). Likewise, margin money for Selling the Call is also required as well as the potential for additional margin calls. However, as the name “costless” implies, as long as the Futures Price stays below the strike price of the Call, the protection in the end will cost almost nothing and will still provide unlimited downside protection at the strike price of the Put.¹²²

THE BUTTERFLY: (Another type of WINDOW/FENCE with a twist):

This is another complex strategy. The Butterfly starts out as a Window/Fence except that another Put is also sold several strike prices below the first Put Option that was bought.

Selling this other Put is the extra twist because it cheapens up the cost of the Window because more premium is received from the additional Put that is sold. However, profit potential is no longer unlimited to the downside but is now limited to the difference between the two strike prices of the Put Options (less their net cost). Unfortunately, in a steep drop in prices, the profit potential from this risk management strategy is limited.¹²³

PUT SPREAD: (BUYING A PUT / SELLING A PUT):

This strategy is not as complex as it sounds. Basically it is the Butterfly above without the Ceiling Price since no Call Option is sold. Now, if the Cash and Futures Market moves higher, there is full participation to the upside and no margin calls. However, to the downside, the most that can be made is the difference between the strike prices of the two puts (less the net cost). It is a one-time expense and there is no subsequent margin calls. This strategy may be appropriate when volatility levels are such that the options seem too expensive but some protection is still desirable. Again, in a market crash, the profit potential from this strategy is also limited.¹²⁴

SYNTHETIC PUTS: (SELLING FUTURES / BUYING CALLS):

This complex hedging strategy works very similar to the simple strategy of just buying a Put but has much more flexibility. Remember, the traditional Put Option allows the buyer to pay a premium for a certain strike price which provides unlimited protection at the selected strike price. In the Synthetic Put, the Futures are sold (for the downside protection) and a Call option is bought to keep losses from the futures predetermined should the market continue to rally. This strategy contains other advantages and disadvantages that are too numerous to mention. Yet for advanced hedging programs, this strategy provides some the greatest

flexibility because either side of the position could be liquidated in some profitable situations (but doing so will of course change the risk structure of the entire hedge).

One of the drawbacks of Synthetic strategies is that they have the largest requirements for initial margin money since the option that is purchased must be fully paid for and the margin for the entire futures position must be met as well. Furthermore, when the futures position is losing large amounts of money, those margin calls must be met even though the option may be absorbing most of the loss. This anomaly is possible because gains in option value due to market appreciation (unlike futures) cannot be used for margin purposes. In other words, even though the option may be shielding actual losses from the futures position, the gain in value from the option cannot be *realized* until it is liquidated. Therefore, experienced risk managers realize that even if they are forced to send in additional margin funds during the time of this synthetic strategy, once the option is liquidated, those extra margin calls will be returned.¹²⁵

SUMMARY OF RISK MANAGEMENT STRATEGIES:

For all commodities, futures, and derivatives, a risk management program is essential for any entity's long-term survival. Frankly, it does not matter much if the hedging plan is simple, moderately advanced, or extremely complex. For best results, top risk managers combine several of these hedging strategies rather than focusing on just one, realizing these strategies are tools for transferring price risk from the cash market onto the Futures market (each with different levels of risk and reward) all working together to minimize price risk and insure long-term financial viability.¹²⁶

V. DERIVATIVES, SWAPS, CONTROVERSIES, COURTS & CONGRESS

Commodity cash forward contracts were the predecessors of what became a sophisticated collage of Futures contracts which now trade on Commodity Exchanges around the world. It could be said Futures and Options were “*derived*” from the underlying cash commodity from which they were created to emulate. However, the metamorphosis continues. Over the past two decades, large market participants (particularly banking institutions) have financially cloned Futures & Options thereby creating a new class of innovative financial contracts called “Derivatives”. These *off-exchange traded* Derivatives primarily exist on the Over-the-Counter Market (OTC).¹²⁷ The OTC Market is a non-regulated market consisting of mostly large banks and institutional clients where trades are conducted privately over the phone or through computer networks and not on an Exchange.¹²⁸

It is quite common after an institution books an *off-exchange* Derivative contract with a counterparty for it to simultaneously lay off that same risk in an offsetting transaction on a U.S. Exchange using an *exchange traded* Futures or Options contract. This dual function trading activity is called “arbitrage” whereby market players look for inefficiencies in either market and then take offsetting trades, pulling out small amounts of profits in the process.¹²⁹ However, because of the leverage available in Futures and Derivatives contracts, those small profits can become quite substantial because the “notional value” is so large (notional value is the size of the contract agreed upon by the parties).¹³⁰ *Notional value* of a Derivatives transaction is synonymous to the *contract size* of an exchange traded Futures contract.

Another arbitrage play (where banks are making enormous profits) occurs where a financial institution enters into a Derivative contract with one of its customers thereby taking the opposite side of the client’s position. Now, the client is allowed to place the Derivative trade without posting any additional margin funds because the financial institution already has

a loan with the client (or a sufficient amount of collateral has already been deposited). This seems attractive to the client because (if approved) trades can be executed without posting additional margin funds. However, according to Dennis Kissler, a floor trader and institutional futures broker, the banking customer rarely sees how much he gives up in this much wider bid/ask spread than had he directly booked the trade on his own into the exchange traded futures market.¹³¹ Indeed, the financial institution supplies a new service to the client (convenience of the transaction without posting initial margin requirements) as long as client has large enough line of credit and enough collateral with the bank. However, much of the time, the financial institution “lays off” that risk (by executing the exact opposite trade) in the exchange traded futures market pocketing the difference in a matter of minutes (and the client is never the wiser).

Kissler concedes his viewpoint may seem biased (as a Futures broker who may have lost business to financial institutions engaged in Derivatives trading) but he claims he is busier than ever. Kissler said, “*In my seventeen years in the Futures Industry, I’ve never been more busy...who do you think calls me now to work the bid/ask spread through my floor brokerage groups to get the best possible fill price...the institutions of course...I haven’t left the dance...only my partner has changed.*”¹³²

The Over-the-Counter (OTC) market is the virtual exchange used for the trading of securities, futures, options, swaps, and other Derivatives transactions that do not take place on an exchange but rather trade *off exchange* between financial institutions and large institutional clients.¹³³ There are several types of Derivative contracts but the “Swap” and “Hybrid” are the most common.¹³⁴ Now, Futures & Options are sometimes referred to as Derivatives as well but Derivatives are distinct in that they trade *off-exchange*.

According to the Bank for International Settlements, the amount of Outstanding OTC Derivatives around the world was valued at \$US 127 trillion as of June 2002.¹³⁵ Interest Rates overwhelming represent the bulk of Derivatives transactions (mostly Swaps) and comprise about 70% of that total while Foreign Currency Exchange is a distant second with only 14% of the market share.¹³⁶ In comparison, Futures traded on organized exchanges around the world is much smaller (\$US 23 trillion).¹³⁷ In other words, when looking at the Futures/Derivatives Industry as a whole, the contracts traded *off-exchange* represent more than 80% of the industry while exchange traded contracts represent 20%.¹³⁸ However, some leaders within the Futures Industry believe the total amount of Futures/Derivatives world-wide has grown to \$200 trillion in 2003 but that the exchange traded contracts have recently grown at a more rapid rate and now compose 1/3 or 33% of the total outstanding value.¹³⁹

Some believe this reason for a revival in exchange traded Futures contracts is due to the financial fallout of Enron as Leo Melamed, Chairman Emeritus and Senior Policy Advisor of the Chicago Mercantile Exchange said, “...*because Enron and the post-Enron world underscored the strength of a centralized exchange clearing and removing the single counterparty risk involved made a big difference.....the CME’s open interest since the Enron failure has grown by something in excess of 40%*”.¹⁴⁰ However, despite Enron’s demise, Oil & Gas trading through Derivatives firms will continue alongside the traditional methods of clearing of trades through the floor on the Exchange. Some energy companies attempt to balance counterparty risk by spreading out their risk management trading programs across multiple counterparties rather than booking all the trades with just one or two Derivatives firms. Yet, Enron created a new set of problems for publicly traded companies as the

reporting of Derivatives transactions in quarterly reports has come under much scrutiny from the SEC but no clear guidance has yet emerged.¹⁴¹

In 1989 the Commodity Futures Trading Commission (CFTC) considered regulating swaps as futures contracts. Ultimately, the CFTC said that *if* counterparties in their private “swap” transactions would not standardize the terms, would not permit unilateral offset before maturity, would not create a formal margining system, would not allow participation by those with no business purpose, and would not market swaps to the general public, then the CFTC would not regulate swaps as futures contracts.¹⁴² However, as time progressed, this framework was headed for a clash with regulators because the Derivatives contracts that were being traded were almost exactly like the Futures, except they were not traded on an exchange. Strangely enough this practice of creating a bilateral contract and allowing the two parties to make or lose money based on an underlying market sounds eerily similar to the bucketshops that existed in the late 1800’s which also networked with one another *off-exchange* and placed bets (a type of swap) on the underlying market.¹⁴³

Swaps are the predominant type of Derivatives contract. A swap is an OTC transaction where two parties agree to exchange payment streams (one person wins the other person loses) based on a specific “notional amount” (similar to contract value) for a specified period.¹⁴⁴ In other words, the notional amount of a swap is the underlying principal amount in which some calculation is based depending upon if the underlying contract is an interest rate, foreign currency exchange, stock index, gold, or energy contract.¹⁴⁵ Typically, there is a settlement day on the last day of the contract where the loser must pay the winner based on where the underlying market closed on the last day of the Derivative contract.

Credit Derivatives are one of the more recent innovations that allow one party, the beneficiary, to transfer credit risk of a “reference asset” (which may or may not be owned by the party) to another party who is called the “guarantor”.¹⁴⁶ This allows the guarantor to assume the credit risk associated with the asset without directly purchasing it either.¹⁴⁷ Both sides of this transaction are analogous to an Option where a purchaser pays a premium to the seller for price protection on an underlying asset.

Since trading in Derivatives requires large amounts of capital, it is primarily the playing field of large corporations, governments, hedge funds (a hedge fund is really a speculative fund and only *hedges* to the extent as an arbitrageur)¹⁴⁸ banks and other financial institutions. Portfolio managers, who want to be free from most of the regulations imposed by the SEC and the CFTC, organize what is called a *hedge fund*.¹⁴⁹ A Hedge Fund is a trading entity formed as a limited partnership where the limited partners are the investors.¹⁵⁰ These limited partners contribute money to the portfolio and the general partners manage the portfolio. Typically, the hedge fund investor must invest \$1 million or have a net worth of \$5 million. Since the hedge fund is only made up of “wealthy people”, the SEC does not feel they need to monitor them like other mutual funds made up of many small investors (although this view is changing). However, because of the composition of wealthy investors, a hedge fund usually takes large risks. Therefore, Futures, Options, and Derivatives play a big role in their portfolios.¹⁵¹

Alan Greenspan and Warren Buffet opposing views on Derivatives contracts

Depending on the market guru, Derivatives are either a “Dr. Jekyll or Mr. Hyde”. For example, Federal Reserve Chairman, Alan Greenspan, has been the most influential advocate

of Derivatives. Greenspan frequently “pounds the table” with such flowery language such as recorded by the Wall Street Journal in 2002. Greenspan said,

“Financial Derivatives have grown at a phenomenal pace over the past 15 years.....Banks appear to have effectively used such instruments to shift a significant part of the risk from their corporate loan portfolios to other institutions.....These Derivatives transactions represent a new paradigm of active credit management techniques and are a major part of the explanation of the banking system’s strength during a period of stress.”¹⁵²

However, Derivatives have their famous detractors as well. At the other end of Greenspan’s utopian paradigm of Derivatives trading, another Wall Street icon, Warren Buffet, paints a picture of an imminent financial Armageddon. In Berkshire Hathaway’s annual report for 2002, Mr. Buffet goes on to say,

“Derivatives are financial weapons of mass destruction, carrying dangers that while now latent, are potentially lethal.....Derivatives and the trading activities that go along with them are time bombs....History teaches us that a crisis often causes problems to correlate in a manner undreamed of in more tranquil times....Unlike commercial banks, investment banks don’t have central banks watching them.....Linkage, when it suddenly surfaces, can trigger serious systemic problems.”¹⁵³

However, even Mr. Greenspan acknowledges the leverage and financial risks (although he believes their risk is manageable) associated with Derivatives.

“But more sophisticated risk management techniques and especially the various forms of derivatives are by construction, highly leveraged. They are thus prone to induce speculative excesses, not only in the U.S. financial system but also through the rest of the world. This potential for systemic risk can be contained through a combination of regulation, supervision, and private-sector action, including better public disclosure. But ultimately, some of that systemic risk must also be absorbed by central banks.”¹⁵⁴

The purposes and ideals advocated by Chairman Greenspan suggest that Derivatives do have a place in our financial markets. Yet, Mr. Buffet’s cataclysmic warning about Derivatives goes to the heart of their “double-edge sword” characteristic (with high return

comes very high risk) as evidenced from the enormous losses suffered by the following institutions in their Derivatives trading programs.

Proctor & Gamble (lost \$200 million in 1994).

Derivatives (like Futures) would also face a judicial determination whether they met the definition of a security under the Supreme Court's "Howey test". *Proctor & Gamble Co., v. Bankers Trust*, 925 F. Supp. 1270 (S.D. Ohio 1996). Bankers Trust, a Broker Dealer and Derivatives firm, entered into an Interest Rate and Currency Swap transactions with Proctor & Gamble (P&G), a publicly traded company.¹⁵⁵ These swap agreements were originally negotiated in late 1993 and early 1994.¹⁵⁶ During the preceding year, interest rates in both the United States and Germany moved substantially higher which resulted in huge losses for P&G. The counterparty to the transaction, Bankers Trust, claimed that they were owed over \$200 million on the two swaps.¹⁵⁷ However, P&G claimed that since it was fraudulently induced into these transactions and because the swaps were fraudulently executed, P&G should owe nothing to Bankers Trust.¹⁵⁸ Furthermore, P&G alleged fraud, misrepresentation, breach of fiduciary duty, negligent misrepresentation, negligence, violations of the Securities Acts of 1993 and 1934, the Commodity Exchange Act, Section 10(b) of the Exchange Act of 1934 and Rule 10b-5, as well as several Ohio state laws.¹⁵⁹

This was a novel case because it involved questions of first impression whether swap agreements would fall within federal securities laws, commodities laws, or Ohio Blue Sky state laws.¹⁶⁰ The court held that the swap agreements *were not securities* as defined by the Securities Acts of 1933 and 1934 and the Ohio Blue Sky laws and that these swap agreements *were exempt* from the Commodity Exchange Act.¹⁶¹

Bankers Trust argued that swaps were not investment contracts because neither parties to the swap “invested any money”, rather they agreed to exchange cash payments at a date in the future.¹⁶² Likewise, the swaps did not involve an investment in a “common enterprise” which entails pooling funds for the purpose of a business venture.¹⁶³ Moreover, Bankers Trust argued the gains from the swaps were “not profits derived from managerial or entrepreneurial efforts of others” but were payments to be made to either party of the transaction according to future changes in U.S. and German interest rates.¹⁶⁴ While the court stated that swaps may meet some of the elements of the Howey test, the missing element was “*the lack of a common enterprise*” as P&G did not pool its money with that of any company nor did it join together in a common venture with Bankers Trust.¹⁶⁵ Contrary to P&G’s assertion, the court found that P&G was a counterparty with Bankers Trust and therefore they could not be lumped together as a “common enterprise.”¹⁶⁶ Furthermore, since Bankers Trust was not managing P&G’s money and the value of the swaps depended on market forces and not Bankers Trust’s entrepreneurial efforts, the swaps were not investment contracts.¹⁶⁷ The court went on to hold that neither were the swaps *notes* as they failed to meet all of the prongs of the “Reves Family Resemblance test”.¹⁶⁸ Therefore, the swaps would not fall under the purview of the Securities Acts of 1933 and 1934.¹⁶⁹

On the other hand, the court stated it did not decide the issue *if swaps were futures contracts* because P&G failed to state a claim under this issue. Moreover, the court commented how as of January 1996, the CFTC had not taken a position whether swap agreements were futures contracts even though it had been granted authority under Title V of the Futures Trading Practices Act of 1992 to exempt certain swaps transactions from the Commodity Exchange Act (CEA) coverage under 7 U.S.C. §6(c)(5).¹⁷⁰ Furthermore, even if

the swaps were exempt from other provisions of the CEA, they would still be subject to its anti-fraud provisions.¹⁷¹

Even though the court had spoken in *Proctor & Gamble* that Derivatives were not securities, their characteristics were still more likely to fall under the auspices of the Commodity Futures Trading Commission (CFTC). Prior to the Commodity Futures Modernization Act of 2000 (CFMA), two long standing rules enforced by the Commodity Futures Trading Commission were: “No futures contract can be bought or sold except on or under the rules of a CFTC-licensed exchange” and “Futures Contracts on individual corporate securities are forbidden”.¹⁷² Even though the CFTC in the early 1990’s chose to not regulate OTC Derivatives as Futures, it was still feared that states might invoke their gambling laws because the “winners” and “losers” were determined by a chance outcome based on an underlying benchmark or index.¹⁷³

Orange County, CA (bankrupt after \$1.7 billion loss in 1994).

One of the alarm bells that should send investors running for cover is when a portfolio manager tells investors, “*don’t worry...these are just paper losses*”. Robert Citron was a county treasurer whose Derivatives investments lost \$1.7 billion in 1994 and caused Orange County to become the largest municipal failure in history.¹⁷⁴ However in the 1980’s, Robert Citron’s return on Orange County’s portfolio outperformed other treasurers, including the state fund. How? He did it by investing in riskier securities. The higher returns led many cities, agencies, and school districts to put their money in the Orange County fund. When the fund collapsed, 185 cities and other agencies had contributed a total of \$7.6 billion into the pool. By taking money it was borrowing from reverse-repo transactions and buying more

Treasury securities, Orange County was able to purchase \$20 billion worth of securities for a portfolio that only had \$7.6 billion in equity.¹⁷⁵ Again, leverage is a double-edged sword.

In the years that led up to 1994, interest rates continued to decline which was good news for Orange County's leveraged bond portfolio which outperformed its peers. However, during 1994, the Fed increased short-term interest rates six times from 3.0 % to 5.5% catching many bond investors by surprise. Higher interest rates caused the value of bonds to fall. The leveraged portfolio only magnified the losses. However, in September, Citron called the losses just "paper losses" but by December, Orange County publicly announced the loss which had grown to \$1.5 billion. Citron was forced to resign and he pleaded guilty to six counts of securities fraud and mismanagement. He was fined \$100,000 and sentenced to one year in jail.¹⁷⁶

Barings Bank (bankrupt after \$1.1 billion in trading losses in 1995).

In 1995, it was discovered that arbitrage trader Nickolas Leeson racked up losses in excess of \$1 billion which bankrupted the 223-year-old Barings Bank of London.¹⁷⁷ Nick Leeson ran an arbitrage trading desk for the bank. Barings Bank had access to the SIMEX Futures Exchange as well as Derivatives markets in both Singapore and Osaka, Japan.¹⁷⁸ However, instead of booking trades for Barings' clients and performing arbitrage activities to lock in small trading profits, on his last day of work, Nick Leeson had accumulated 61,039 Nikkei Futures Contracts, 26,000 Japanese Bond Futures, and a huge stock option straddle position (all of which were losing millions of dollars).¹⁷⁹ Not only did Nick guess wrong on all three positions (and continue to add to those losing positions) but unfortunately for Barings Bank, he also had access to back office records which allowed him to cover up the trading losses for over two years.¹⁸⁰ The total loss was over \$1 billion.¹⁸¹

Long-Term Capital Management (lost \$4.5 billion in 1998 and Federal Reserve led a Wall Street bailout to avert a financial crisis).

John Meriwether, Larry Hilibrand, as well two famous Nobel Prize economists, Merton Miller and Myron Scholes, helped found Long-Term Capital Management (LTCM) in 1993.¹⁸² Initially, \$1.25 billion of capital was raised for the fund but more would come later. Prior to LTCM, Myron Scholes achieved fame for his contribution to the “Black-Scholes Option Pricing Theory” in which mathematical equations were created to value market price behavior.¹⁸³ LTCM used this theory to value Derivatives transactions in a variety of markets, especially bonds. As an aggressive Hedge Fund, LTCM became famous as it invested in Derivatives and other highly leveraged speculative strategies with the objective of taking advantage of market irregularities. At its peak, a \$1,000 initial investment in LTCM would have grown to \$4,000 in just four years. However, *it took just five weeks for LTCM to lose over \$4 billion.*¹⁸⁴

“The fund (LTCM) had entered into thousands of Derivative contracts, which had endlessly intertwined it with every bank on Wall Street. These contracts, essentially side bets on market prices, covered an astronomical sum – more than \$1 trillion worth of market exposure”.¹⁸⁵

In September 1998, the Federal Reserve orchestrated a \$3.65 billion bailout of LTCM which included fourteen Wall Street banks¹⁸⁶ (most of them were LTCM’s counterparties on many of these trades). The Fed was extremely concerned as several large financial institutions had entered into swap contracts with LTCM. Severe market repercussions were expected to follow if LTCM defaulted on its swaps which some suggested would send shockwaves throughout the entire financial markets.¹⁸⁷ Interestingly, both George Soros and Warren Buffet became potential white knights for LTCM.¹⁸⁸ However, during LTCM’s

demise, Soros was having hedge fund problems of his own. On the other hand, Buffet did in fact make a low bid for LTCM, but it was rejected.

From January 1998 to the September bailout later that year, LTCM was long Russian Bonds, short Japanese Bonds, long S&P 500 stocks, (among other losing positions) which totaled \$1.6 billion in losses.¹⁸⁹ Furthermore, LTCM lost another \$1.3 billion loss in Equity volatility and \$1.6 billion loss in Swaps, bringing the grand total loss to \$4.5 billion. After the bailout on September 29, 1998 (and even with the Federal Reserve lowering interest rates on the very same day) LTCM's bleeding continued.¹⁹⁰ Within the first two weeks, the new consortium of rescuers lost a combined \$750 million (perhaps Buffet's low bid was a prophetic indication that things would get worse before they got better). The consortium's losses in their new hastily arranged venture quickly translated into lower stock prices for their publicly traded companies as they reported these losses to their shareholders.¹⁹¹ On October 15th, the Fed cut rates again for the second time (signaling that it would continue to do so until this crisis subsided). Since April, LTCM had lost almost \$5 billion dollars, 92% of its value from top to bottom.¹⁹² However, October would ultimately prove to be the bottom. During the next two years, LTCM would be virtually liquidated as market conditions gradually improved.¹⁹³ Even though the Federal Reserve did not contribute any funds directly to the bailout, without the Fed's organizational assistance and subsequent interest rate cuts, the LTCM debacle had the potential of causing a severe systemic crisis. Surprisingly, just six months after LTCM's demise, Greenspan would still call for a less burdensome regulation of Derivatives.¹⁹⁴

Enron (Derivatives losses and off-balance-sheet fraud discovered in 2001 leads to a \$1.2 billion reduction of equity and ultimate bankruptcy for the largest energy and derivatives trading firm in the world).¹⁹⁵

Enron. Some called it another LTCM.¹⁹⁶ The bankrupt publicly traded company of Enron made infamous a cast of characters such as Kenneth Lay, Jeffery Skilling, Andrew Fastow, and whistle-blower Sherron Watkins. Enron's auditor, Arthur Anderson, received the death penalty and is no more. Off-balance-sheet assets and Special Purpose Entities (Enron's SPE's were called Raptors) were used to "cook the books" at Enron to disguise transactions and hide losses from shareholders.¹⁹⁷ In response to Enron's fraud, the Sarbanes-Oxley Act of 2002 was overwhelming passed by Congress setting new requirements for publicly traded companies in the areas of Accounting, Securities, and Corporate Governance. The stated purpose of Sarbanes-Oxley is "to protect investors by improving the accuracy and reliability of corporate disclosures made pursuant to the securities laws and for other purposes".¹⁹⁸

It all began in 1984 when a small energy company called Houston Natural Gas would eventually transform itself into a giant trading company that became known as Enron.¹⁹⁹ Unfortunately, Enron became involved in almost every new market that came along, including Derivatives. Not only was Enron a player in energy Derivatives, it extended its energy trading model to Weather Derivatives and Internet Bandwidth Derivatives.²⁰⁰ In fact Enron created the first Weather Derivative in 1997.²⁰¹ By 1999, Enron's internet trading platform became the world's largest business-to-business platform averaging 6,000 trades per day worth \$2.5 billion.²⁰²

At the heart of Enron's controversy and fraud were its Derivatives transactions which it entered into with several Raptor's (SPE's) which totaled over \$1.5 billion. Basically, Enron booked over \$500 million in income from these Derivatives transactions. However, the Raptor's lacked sufficient credit capacity to pay Enron on its hedges as Sherron Watkins (an

Enron accountant) soon discovered. In Watkins' anonymous (but now infamous) memo, she methodically linked Enron's woes to its Derivatives (swaps) transactions.²⁰³

“We (Enron) recognized over \$550 million of fair value gains on stocks via our *swaps* with Raptor, much of that stock has declined significantly.....The value in the *swaps* won't be there for Raptor, so once again Enron will issue stock to offset these losses.....It sure looks to the layman on the street that we are hiding losses in a related company and will compensate that company with Enron stock in the future.....the equity holders have no skin in the game, and all the value in the entities comes from the underlying value of the *derivatives*, unfortunately in this case, a big loss.....Looking at the stock we *swapped*, I also don't believe any other company would have entered into the *equity derivative transactions* with us at the same prices or without substantial premiums from Enron. Raptor looks to be a big bet, if the underlying stock did well, then no one would be the wiser. If Enron stock did well, the stock issuance to these entities would decline and the transactions would be less noticeable. All has gone against us. I firmly believe that executive management of the company must have a clear and precise knowledge of these (*derivatives*) *transactions* and they must have the (*derivatives*) *transactions* reviewed by objective experts in the field of securities and accounting.The related party entity has lost \$500 million in its *equity derivative transactions* with Enron. Who bears that loss? I can't find an equity or debt holder that bears that loss. Find out who will lose this money. Who will pay for this loss at the related party entity? If it is Enron, from our shares, then I think we do not have a fact pattern that would look good to the SEC or investors.”²⁰⁴ (*emphasis added*)

Enron's subsequent bankruptcy was the largest in U.S. history at that time.²⁰⁵ At its peak, Enron reached over \$90 per share in August 2000.²⁰⁶ By December of 2001, the stock price would be worthless.²⁰⁷ Coincidentally (or perhaps not), the Natural Gas and Crude Oil Futures also dropped severely during this same time period which caused oil and gas companies who contracted with Enron (instead of booking their trades through the Exchange) to lose millions of dollars when Enron defaulted on their contracts.

In January of 2002, Swiss-based Wall Street firm, UBS Warburg (the last firm to downgrade Enron's stock) would purchase Enron's energy trading business by beating out

Citigroup.²⁰⁸ Enron's energy trading business generated about 90% of the company's \$101 billion in revenue in 2000.²⁰⁹ For this business, UBS Warburg paid \$0 upfront (that's right, zero dollars) and agreed to pay Enron and its creditors 33% of the pre-tax profits for two years with an option of buying Enron's stake in subsequent years.²¹⁰ Former Senator Phil Gramm would join UBS Warburg a few months after its Enron purchase.

How much the board of directors knew about the accounting treatment of the SPE's and Enron's Derivatives transactions is unclear. However, Enron's Board of Directors was not without the highest Derivatives expertise. In 1993, former Chairperson of the Commodity Futures Trading Commission (CFTC), Wendy Graham (and wife of Senator Phil Gramm), left her post at the CFTC to join Enron's board of directors. During her tenure at the CFTC (1988-1993), Graham fought aggressively for swaps and other Derivatives to be exempt from CFTC regulation.²¹¹ In fact, virtually her last official act as CFTC chair (before joining Enron) was to grant a regulatory exemption for OTC Derivatives.²¹²

Prior to LCTM and Enron's demise, CFTC Chairperson Brooksley Born, favored stronger regulation of the Derivatives industry. Indeed, the Wall Street Journal reported how Born on April 21, 1998, stood her ground in a skirmish with Fed Chairman Alan Greenspan and then Treasury Secretary Robert Reich during a meeting of regulators before the President's Working Group on Financial Markets (a committee which was formed after the stock market crash of 1987)²¹³. Mr. Reich brusquely informed Ms. Born that she had no right to explore whether more regulation of Derivatives was needed. Likewise, Mr. Greenspan warned that she risked disrupting the U.S. capital markets. However, Ms. Born unflinchingly asserted that as the head of the independent agency (the CFTC) she had the authority and would go right ahead.²¹⁴

Leading Wall Street Derivatives firms such as J.P. Morgan and other Derivatives users like Enron beseeched both the Fed and the Treasury to stop Ms. Born as the CFTC released a “Concept Release”²¹⁵ which raised 75 questions about the way the Derivatives market was regulated.²¹⁶ Even pro-investor advocate and then SEC Chairman, Arthur Levitt, issued a statement voicing his serious concerns about Born’s CFTC study. A few months later during an interesting exchange of amiable banter, Mr. Greenspan would complain to the House Banking Committee that Ms. Born was trying to “*pick a fight with the capital markets*”.²¹⁷ He went further to say (referring to the proposed Concept Release about Derivatives) that “*if somebody says to me that that they are contemplating punching me in the nose, I don’t presume that it is a wholly neutral statement*”. Ms. Born, a veteran litigator, suggested that Mr. Greenspan had a distorted perception. She told him she was merely inquiring (again referring to the Concept Release), “*Do you think you need a punch in the nose*”?²¹⁸

Ms. Born’s concerns about the OTC Derivatives market in early 1998 proved to be prophetically accurate as LTCM would blow up just a few months later (and Enron would follow a few years later). After the LTCM debacle (in a speech to the Chicago Kent-IIT Commodities Law Institute) Born would declare,

“Unlike Futures Exchanges where bids and offers are quoted publicly, the OTC Derivatives market has little price transparency. Lack of price transparency may aggravate problems arising from volatile markets because traders may be unable accurately to judge the value of their positions or the amount owed to them by their counterparties. Lack of price transparency also may contribute to fraud and sales practice abuses, allowing OTC Derivatives market participants to be misled as to the value of their interests. Transparency is, of course, one of the hallmarks of exchange-based derivatives trading in the U.S.....unlimited borrowing in the OTC Derivatives market like the unlimited borrowing on securities that contributed to the Great Depression may pose grave dangers to our economy.....Clearing of OTC Derivatives transaction could be a useful vehicle for imposing controls on excessive extensions of credit. I believe

that it is essential for federal financial regulators to consider how to reduce the high level of leverage in the OTC Derivatives market and its attendant risks.”²¹⁹

In January of 1999, Born sent a letter to then President Bill Clinton informing him of her decision to not seek reappointment for a second term.²²⁰ She would return to her very successful Derivatives law practice at the prestigious law firm of Arnold & Porter. However, one month before Born left the CFTC in June of 1999, she would encourage Congress to require hedge funds to file detailed quarterly reports indicating their exposure to market risk which would allow investors, counterparties and creditors to assess the hedge fund’s credit worthiness. Furthermore, she suggested that this information should be made available to regulators and give them expanded risk assessment powers relating to unregulated affiliates of broker-dealers and futures commission merchants and to not rule out the possibility of direct regulation of Derivatives dealers.²²¹

Nonetheless, with her advice abandoned, the CFTC Concept Release was repealed in November of 2000. Shortly thereafter, the 106th Congress passed and on December 21, 2000, Bill Clinton signed into law H.R. 5660, which became the Commodity Futures Modernization Act of 2000 (CFMA). The stated purpose of the CFMA is to “reauthorize and amend the Commodity Exchange Act to promote legal certainty, enhance competition, and reduce systemic risk in markets for Futures and Over-the-Counter Derivatives, and for other purposes”.²²² The CFMA insured that Derivatives were here to stay and that their regulation remained unimpeded.

The CFMA is divided into four basic parts. **Title I provides legal certainty for Over-the-Counter Derivatives by excluding from the Commodity Exchange Act certain**

bilateral Swaps entered into on a principal-to-principal basis.²²³ This means that these products offered by banks and other sophisticated parties are legal and enforceable. The CFMA also addresses the fears that by excluding OTC Derivatives from the futures laws, the SEC may attempt to regulate them as securities. The CFMA provides the SEC with only limited authority over Swaps for fraud, manipulation and insider trading. **Title II lifts the ban on Single and Stock Index Futures** by repealing of the Shad Johnson Accord and now Futures contracts can be traded on individual stocks and other baskets of stock indexes.²²⁴ The SEC and CFTC are authorized to jointly regulate the new single stock futures products as they can be traded on both Securities and Futures exchanges.

When it appeared the CFMA would not pass, Title III and Title IV were added. **Title III of the CMFA amends the Gramm-Leach-Bliley Act in regard to guidelines for the SEC in regulating equity-based Swaps.**²²⁵ New amendments were also made to the Securities Act of 1933 and the Securities Exchange Act of 1934. In addition, limitations were placed on the SEC's authority with respect to its jurisdiction relating to Swap Agreements and made clear that Security Based Swap agreements are not securities and prohibits the SEC from regulating them as such. Furthermore, the SEC does not have authority to regulate Securities Derivatives contracts entered into by banks nor is the legislation intended to place new regulatory burdens on banks. However, the SEC does have enforcement authority on a case by case basis in instances of fraud, manipulation, or insider trading in connection with Swaps. Finally, **Title IV provides legal certainty for banking products.**²²⁶ It is a free standing part of the law (which means that it is not a part of banking or commodities laws) which clarifies the jurisdictional line between banking and futures products.²²⁷

CONCLUSION

When the Securities Act of 1933 was enacted just within a few weeks of Franklin D. Roosevelt taking office, it was the first time national securities legislation had ever been passed by Congress.²²⁸ In his inaugural address, Roosevelt announced that “*the money changers have fled from their high seats in the temple of our civilization*”²²⁹ (which was a symbolic reference to Jesus casting out the moneychangers from the temple).²³⁰ Later that spring, the Glass-Steagall Act of 1933 (also called the Banking Act) would radically alter the face of banking by creating deposit insurance and separating investment and commercial banking.²³¹ However, some sixty years later, the Gramm-Leach-Bliley Act would repeal many restrictions contained in the Glass-Steagall Act which left some wondering if the moneychangers had indeed returned to Wall Street’s temple. Of course, Derivatives (as we know them today) were not in existence in the 1930’s. Nevertheless, the fact that Gramm-Leach-Bliley Act and the Commodity Futures Modernization Act of 2000 inserted exemptions for Swap Agreements directly into the Securities Act of 1933 suggests how influential the banking lobby had become.²³²

Even though Derivatives received favorable treatment in *Proctor & Gamble v. Bankers Trust*, as well as special exemptions from the CFTC, the Gramm-Leach-Bliley Act, and the Commodity Futures Modernization Act of 2000, it is probable that Derivatives litigation will increase in the future due to the enormous financial losses associated with these colossal-sized transactions. To some it may appear (because of the large dollar amounts involved), that Derivatives losses are outrageous and should be banned altogether (although one could argue that there are outrageous profits as well). However, it should be noted that in the cases of fraud, financial losses are always outrageous when illegal activity by one party causes monetary damages to another. Therefore, the question is, do we really want federal regulators

to limit a market participant's right to freedom of contract because one party "might guess wrong" and lose millions of dollars in a transaction? If both parties can financially assume the underlying inherent risks associated with Derivatives contracts (assuming they are made in compliance with full and fair disclosures) should we preclude their trading in the United States only to watch this business move overseas as Alan Greenspan suggests will happen?²³³

These two issues (freedom of contract and overseas competition) may explain why Congress and the federal financial regulators have sought to keep OTC Derivatives exempt from scrutiny provided they remain the domain of institutions and not accessible to the investing public. Of course, the systemic risks that could potentially harm the world's financial system cannot be overlooked either. Perhaps the abuse of leverage is where regulators should focus their regulatory oversight by requiring some form of institutional margining of funds similar to the initial margin requirement system used by all Futures Exchanges. Yet, some would argue that this would simply turn OTC Derivatives back into exchange traded Futures contracts. Others point to a world organization already in place which is working to bring financial institutions together to insure uniformity and stability to the OTC Derivatives markets. That organization is called the International Swaps & Derivatives Association (ISDA).²³⁴

The ISDA was founded in 1985 and has more than 600 members of which 202 are primary members representing the largest OTC Derivatives dealers.²³⁵ According to the ISDA, less than one percent of all outstanding OTC Derivatives (\$127.6 trillion) are collateralized²³⁶ Since 1992, the ISDA requires transactions to be documented (in a "Master Agreement") between parties of different jurisdictions around the world and when transactions occur in different currencies.²³⁷ This Master Agreement also standardizes damages provisions, close

out provisions, force majeure termination events, interest, and compensation provisions between the parties and it is widely accepted by most Derivatives dealers around the world.²³⁸

While the court seemed unsympathetic to Proctor & Gamble's \$200 million dollar Derivatives loss, perhaps prospective entities who are harmed by these contracts might be able to prevail under other legal theories.²³⁹ One phenomenon that has occurred after the passage of the Commodity Futures Modernization Act of 2000 is the number of new dealers entering into the OTC Derivatives markets. Mid-size Banks are likewise joining the Wall Street Banks and are jumping head first into Derivatives trading as a means to generate additional fees and create new profit centers by executing Derivatives transactions with their existing clients. Since the financial institution already has the customer's loan or investment banking business, it is a rather easy task to persuade (or demand) their client to use their new "in-house trading services". One inducement for the client (which is different from exchange traded products) is that margin funds do not have to be directly posted for Derivatives trades with the bank (although market fluctuations of the Derivatives will be assessed internally against lines of credit). Regardless of the marketing spin, *there is no free lunch*.

Since in many cases the bank already has a loan with the client, it can easily evaluate counterparty risk of the client by using credit information already in its possession (from a prior fiduciary purpose). Of course, if the client enters into Derivatives trades with the bank, the client's available collateral and equity will be closely monitored at all times, especially when the market moves against the client. Here lies the quandary. At what point does the financial institution breach fiduciary duties owed to the client when it switches roles from a fiduciary to a counterparty? What will the ramifications be after the client loses large amounts of capital through Derivatives losses (paid from the client directly to the bank) if the

bank uses its existing relationship without a good faith and fair disclosure to the client (or uses undue influence) of all the important details of this new trading relationship (i.e. transaction fees, hidden costs, wider bid/ask spreads, increased interest costs, leverage risks, conflicts of interests, etc.)?

Unfortunately, banks and other financial institutions may become over confident if they rely too much on the *Proctor & Gamble* decision and recent legislation. They may be surprised to discover how their behavior was found to be culpable after all (based on other legal theories) and thus held financially responsible for the OTC Derivatives losses of their clients even though they alleged these were just “arms-length transactions”.

Indeed, the client not only runs the risk of its fiduciary becoming an adversarial counterparty but the client may be unknowingly booking *off-exchange* trades with the next LTCM or Enron (try explaining to shareholders that you were unable to collect on your *off-exchange* contracts even though they were profitable). Finally, if Warren Buffet is right, (although he too trades in both Futures and OTC Derivatives) unconstrained Derivatives trading might be the catalyst which causes the entire economic system to collapse in a financial holocaust. This warning reverberates in the closing words of a former Federal Reserve member who voices his consternation in his book about the impropriety of Securities & Derivatives Regulation. Martin Mayer writes, “*The tragedy for all of us would be if the Fed, the Treasury, and Congress’s reverence for people who make a lot of money left us unprotected against some sudden revelation of the truth that becomes obvious only in hindsight, that a lot of them don’t know what they’re doing*”.²⁴⁰

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⁵² *Id.* at 77.

⁵³ *Id.*

⁵⁴ *Id.*

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⁵⁸ *Id.*

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