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# ❖ Contrarian Research Report ❖

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❖ <b>Contrarian Views and Ideas</b> ❖
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## Studies In Absurdity

**Subject: Further Basic Principles of Croupier Investing**

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## **I - The Fundamental Theorem of the Croupier**

Given any economic growth rate for a society, it appears that the socio-economic inter-relationships among the various constituent members of that society multiply more rapidly than the economic growth rate. If true, this would be a function of specialization; of course, it is specialization that makes possible productivity improvement that, in turn, makes possible the expansion of the production possibility frontier that, in turn, makes possible a higher standard of living.

In a specialized society, the failure of even a small portion of the constituent members to perform economic functions as expected or required can entail widespread and possibly unpredictable consequences for the economic systems. The consequence for securities markets is that the reasons for market value fluctuation of any individual security or set of securities is multi-causal and probably theoretically infinite. Thus, alternatively expressed, the risks to a set of securities cannot be completely enumerated. One can only more completely enumerate the risks than might have been possible hitherto. This yields that which will be called the Fundamental Theorem of the Croupier:

*Given any risk control strategy for a portfolio, it should always be possible to devise a more precise and refined risk control strategy.*

## **II – The Fundamental Premise of the Fundamental Theorem**

It will be observed that the fundamental theorem is based, in part, upon a notion that might be referred to as the fundamental premise. This is stated at the onset of this paper in Section I and can be more briefly formulated as follows:

*The complexity of a given society grows more rapidly than the given society itself.*

It is perhaps for this reason that the trading volumes of both the 2-year and 5-year U.S. Treasury future on the Chicago Board of Trade each exceeded \$10 trillion<sup>1</sup> in 2005. The entire U.S. national debt is only at the level of \$8.9 trillion. Hence, if the U.S. national debt were only comprised of 2 and 5 year notes (which is obviously false) and there were no trading in the actual underlying instruments (which is also obviously false), the turnover rate on U.S. Treasury debt would be at the level of 224%. The turnover rate is actually much greater. In terms of risk, the 2- and 5-year Treasury Notes may be considered to be one of the lower risk security types that exist in the world. The turnover figure should be compared with NYSE 2005 turnover of 102%. (source: NYSE Factbook).

It seems reasonable to suppose that there is a greater need to control risk for the companies listed on the New York Stock Exchange than there would be for the 2- and 5-year U.S.

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<sup>1</sup> Source: CRB Commodity Yearbook 2005

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Treasury securities. In fact, according to the U.S. Bureau of Public Debt, the total amount of marketable U.S. debt outstanding as of March 31, 2006 is \$4.34 trillion<sup>2</sup>. Approximately \$1.042 trillion of this amount is Treasury Bills that mature in less than one year. Treasury notes of all maturities are only outstanding at the level of \$2.4 trillion. Thus, viewing only the 2- and 5-year Treasury Futures traded on the Chicago Board of Trade and without reference to any trading in the underlying instrument, it is fair to say that turnover in these instruments easily exceeds the annual figure of 900%.

One might wonder why relatively shorter term U.S. Treasury securities generate as much futures activity as has been the case. The answer can only be reasoned supposition. The analytical tools used for risk control in the field of bonds are far more precise than those used for equities. For instance, a bond portfolio with a given convexity and a given duration can be expected to generate a predictable return in accordance with the interest rate environment. One can know the effect of small changes in portfolio duration. The corresponding equity tools such as net long/short exposure or effective beta are far less precise. Ergo, it seems that portfolio activity varies in proportion to the precision of the available risk control tools rather than in proportion to the risk of the underlying instruments. Hence, one can state the following working supposition:

***Working Supposition*** – *A croupier can stimulate trading activity by making available risk control tools.*

Clearly, the complexity of a society, or in this case the complexity of the banking system, is a significant factor. The modern bank is a large holder of U.S. Treasury Securities. It answers not only to shareholders but also to stakeholders such as depositors, borrowers, regulators, correspondent banks as well as legislators. These stakeholders will tolerate very little volatility of shareholders' equity. The failure of the bank to properly function can be disastrous for wide swathes of a given society. Given interest and principal payments as well as the continual passage of time, a bank portfolio is constantly changing. Therefore, much activity is required merely to maintain convexity and duration at a constant level.

### **III – The Logical Consequences of the Working Supposition**

#### **A) Activity Stimulation in Commodities Due to Competition**

The New York Mercantile Exchange, known as NYMEX, is the dominant North American crude oil contract trading venue. On April 21, 2006, the NYMEX set an all time daily volume record of 1,420,734 futures and options contracts. Of course,

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<sup>2</sup> Over \$4 trillion of the U.S. national debt is in the form of non-marketable securities held by the Social Security Administration, in the form of U.S. Savings Bonds or held by various state treasuries as escrow for bond redemption.

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NYMEX trades other commodities aside from oil. In addition, recent record energy prices have contributed to interest in commodity trading.

However, in recent years the Intercontinental Exchange (NYSE - ICE) has created competition for NYMEX. The Intercontinental Exchange has become a significant energy futures exchange. This is partly the result of the Intercontinental Exchange purchase of the International Petroleum Exchange in 2003. On April 5, 2006, the Intercontinental Exchange reported its third consecutive month of record volume with volume for March 2006 at a level that was 115% greater than March 2005. Over 50% of ICE volume is in the Brent Crude Contract. This contract directly competes with the primary NYMEX contract which is based upon Light Sweet Crude 1,000 barrels per contract delivery point Cushing, Oklahoma.

The Brent contract traded on ICE is based upon light, sweet North Sea crude that is often thought of as an alternative to the NYMEX primary light sweet crude oil contract. Commentary with regard to the NYMEX and ICE usually makes reference to the competition between these two similar contracts. However, even such competition can present opportunity. For example, NYMEX now trades contracts based upon the spread between the West Texas and Brent contracts.

If trading moves towards the ICE Brent contract, the resultant demand might create a price differential between the West Texas and Brent contracts and this would be reflected in a change in value in the spread contract. NYMEX now trades spread contracts on the differential between the light sweet crude oil futures contract and the Canadian Bow River crude at Hardisty, Alberta. NYMEX also trades contracts based upon the differential between light sweet crude oil and the following four domestic U.S. grades of crude oil: Light Louisiana Sweet, West Texas Intermediate, West Texas Sour and the so-called MARS blend. Thus, the differences between the NYMEX and ICE futures as well as the differences between NYMEX and Canadian Futures Exchanges actually have become the basis for new futures contracts. The competition actually creates the possibility of new trading securities.

It should be noted that there are significant differences between NYMEX and ICE. NYMEX is primarily a futures exchange. A futures exchange trades commodity contracts with standard uniform characteristics. In contrast, nearly one half of ICE is an OTC or over the counter exchange. OTC contracts have non-uniform or customized terms. Thus, there can be many different variations of an OTC Brent contract. Moreover, a futures contract may ultimately be settled by actual delivery of an underlying commodity. An OTC contract is always by cash payment. Each contract is a non-standardized arrangement between two counterparties. Furthermore, many OTC contracts are actually differential or spread contracts. For instance, an OTC contract may be based upon the spread differential of energy product between two delivery points such as Henry Hub and Cushing. Roughly 45% of the ICE business is OTC. The OTC business in notional amount is growing at 235% per annum. Hence, ICE is

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not merely an institution devoted to the capture of market share from NYMEX. It appears that the mere availability of new trading instruments is a stimulus to usage. The fact that each exchange can continually devise new trading instruments is an illustration of the Fundamental Theorem of the croupier as stated in Section I.

### B) Activity Managed Exchange Traded Funds

According to the Mutual Fund Factbook 2005 edition published by the Investment Company Institute, there were 8,044 U.S. mutual funds in existence in 2004. This accounted for over \$8 trillion of net assets. There are over \$12 trillion of purchases of mutual funds as well as over \$12 trillion of redemptions each year. If the mutual funds industry were an exchange it would record 150% annual turnover and be larger than the NYSE. Naturally, none of this activity takes place upon an organized exchange. It is processed by a handful of custodian banks.

These figures do not include the rapidly growing ETF's or exchange traded funds that actually do trade upon organized exchanges. According to the Investment Company Institute, Exchange Traded funds have (as of February 2006) net assets that total approximately \$315 billion. The comparable figure for U.S. mutual funds in February 2006 was \$9.2 trillion of net assets. Hence, the ETF's represent only 3.4% of total mutual fund assets.

If conventional mutual funds could trade during the trading day as do the ETF's, it is obvious that an enormous quantity of activity would be created that would be of direct benefit to various croupier companies. In fact, entirely new types of transactions would take place. It would become possible to create basis trades among managers. One could conceivably establish a long position in a fund with good management and a short position in a fund with poor management. One could further refine the trade by limiting the selection universe to managers of similar styles. In fact, it is not absurd to imagine that manager basis trades might evolve into an entirely new asset class. It would certainly have less risk than pairs trading since there is no possibility of an acquisition at a premium of the fund held in short position. Consequently, this type of basis trade would be at the very least viewed as a pairs trade with no exogenous event risk. The funds would almost certainly trade at net asset value, as does any conventional exchange traded fund, since there would never be a shortage of supply given that demand would be satisfied by the open-end nature of the actively managed exchange traded fund.

In fact, manager skill level basis trades are not the only hedging or risk control that could be envisaged. In principle, a fund could be long or short one or more of its competitors. It is already possible to do this with passive exchange traded funds. Of course, croupiers would enjoy an enormously expanded level of business activity.

The reader perhaps experiences at this point the feeling of futility that often accompanies any exercise in pure fantasy. However, this is not an exercise in fantasy.

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The creation of actively managed Exchange Traded Funds is under consideration by the Securities and Exchange Commission. Interested readers should consult SEC release No. IC-25258; File No S7-20-01 entitled Actively Managed Exchanged-Traded Funds. The release is a request for public comment.

Passive Exchange Traded Funds were only authorized in 1993. The first such fund was based upon the S&P 500 and is known as SPDR Trust. It trades on the American Stock Exchange. The SPDR Trust has \$52 billion of net assets and recently has been trading in excess of 70,000,000 shares per day. Daily trading value therefore exceeds \$9 billion, or 17.6% turnover every day. Therefore, over the course of a year, given perhaps 245 trading days, there should be the astonishing turnover figure of 4,330%. This is clearly an important product for the American Stock Exchange.

In order to comprehend this turnover figure it may be useful to examine the trading characteristics of ExxonMobil which is the largest company in the S&P 500. ExxonMobil has an average trading volume per day of 18.4 million shares. This results, at current prices, in an average recent daily trading value of \$1.17 billion. During the course of a year at this rate ExxonMobil will have experienced 72% turnover. Similar calculations can be performed for all of the leading S&P 500 companies and a similar result will be obtained. For instance, General Electric daily trading value is only \$993 million. This would result in an annual turnover rate for the GE share of 68.7%. If one were to ignore double counting of volume on NASDAQ and accept without adjustment the reported Google volume figure, then Google has daily trading value that is equivalent to approximately \$5.7 billion. If continued at the current rate for a trading year, this would generate a turnover rate of 971.5%. In reality, the true turnover rate is lower. Yet this is higher than GE and Exxon. It is very small in relation to the SPDR turnover rate.

A useful comparison of Google without adjustment for NASDAQ double counting of volume is to compare these figures with the comparable unadjusted volume figures for the NASDAQ 100 Trust, otherwise known as the QQQQ. This trust has a share price of 42 and has recent daily volume, as reported by NASDAQ, of 130 million shares. Thus daily trading value equals \$5.46 billion. The net assets of the NASDAQ 100 are, according to NASDAQ, roughly \$21.4 billion. Thus the NASDAQ 100 would, in principle, generate an annual turnover rate of 6,150%.

It must be emphasized again that due to NASDAQ double counting of volume, neither the Google nor the NASDAQ turnover rates are as high as enumerated for the purposes of this exercise. However, since double counting affects both instruments the ratio between the Google and the NASDAQ 100 turnover figures may be examined to obtain a sense of the differences in activity levels between the two instruments. NASDAQ 100 seems to have over 6x the activity of Google.

This is similar to the U.S. Treasury futures activity level observed in relation to the activity level of the New York Stock Exchange (section II). In fact, the turnover rate of

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the SPDR Trust traded on the American Stock Exchange is far greater than the turnover rate of the New York Stock Exchange even though most of the constituent members of the SPDR (S&P 500) actually trade on the NYSE.

As a consequence another working supposition may be stated as observed in Section II of this paper:

***Working Supposition # 2 – It seems as if trading activity is a function of the perceived precision of the instrument rather than of the risk of the underlying instrument.***

Readers may object to this supposition upon the basis that trading activity is really a function of liquidity. Yet, liquidity is merely a synonym for trading activity. Thus, one would say a given security trades at great volume because it is liquid and it is liquid because it trades at great volume. The more interesting point is that ExxonMobil, with a market value of \$396 billion, will perhaps generate trading activity of \$1.17 billion, whereas the SPDR with a market value of \$52 billion will generate trading activity with a value that exceeds \$9 billion. One might therefore expect that an actively managed exchange traded fund will generate much trading activity.

The reader might wonder why anyone might propose the creation of an actively managed exchange traded fund for any reason apart from the generation of mere trading activity. In fact, many well reasoned arguments can be advanced. One such argument relates to proper expense allocation. As noted earlier in this section, the turnover of open end mutual fund assets, based upon the figures made available by the Investment Company Institute, suggest a turnover rate that easily exceeds 150%. In order to accomplish the purchase and redemption of shares in a mutual fund, the fund itself must engage the services of a custodian to keep shareholder records. In any fund, there are who that trade often, which means frequently purchase and redeem, and those who are simply content to be long term investors. Since the expenses associated with purchase and redemption are paid by the fund, these costs are shared by all fund participants. The most significant costs are never included in the expense ratio. These are the commission and trading friction costs that the fund experiences when the fund itself trades to accommodate admission and withdrawals. Although the operating costs of the fund must necessarily be shared by all fund participants, an actively managed exchange traded fund would provide a mechanism whereby investors could purchase and sell units outside of the fund on an exchange and thus reduce activity within a fund much to the benefit of those long term investors who merely wish to be continually invested in a given fund. Naturally, in order to accomplish frequent purchase and sale, the investors who wish to engage in this activity would need to make use of brokers, perhaps electronic brokers and exchanges. In other words, new business would be generated by a croupier.

Of course, it could be argued that the increase in trading in the actual ETF would be exactly balanced by the reduction in investor induced turnover at the mutual fund level. Ergo, there should be no net change to systemic activity levels. However, this does not

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appear to be the actual ETF experience given the data presented regarding the SPDR and the NASDAQ 100.

Actively managed exchange traded funds might soon become a reality. If this does occur, it should prove to be a most entertaining laboratory for the inventive and imaginative faculties of the croupier employees. The proposal envisages that each actively managed mutual fund would create an ETF class.

## C) One Chicago and Single Stock Futures

One Chicago is the exchange upon which trade single stock futures as well as futures upon so-called narrow-based indexes. One Chicago is jointly owned by the Chicago Mercantile Exchange, the Chicago Board of Trade and the Chicago Board Options Exchange. Trading in single stock futures formally commenced on November 8, 2002. On that day 3,000 contracts were traded. A single stock future typically represents 100 shares of underlying stock. In November 2002 there were single stock futures on 21 stocks. The exchange currently lists 206 single stock futures.

In principle, the need for single stock futures is not different from the need for commodity futures. For instance, a pension fund or a foundation may have knowledge of future cash flow or transactions and wish to guarantee the price of a security or group of securities. In the case of a foundation, it may have been awarded a significant amount of a single stock upon the demise of a benefactor. Yet, the foundation cannot actually receive the shares until the estate of the benefactor emerges from probate. The foundation wishes to guarantee the price of the stock some number of months in the future. It can accomplish this by the sale of the stock future. Of course, this could be accomplished as well by short sale of the actual stock. However, single stock futures have a margin requirement of only 20%. This is in comparison to the customary 50% margin requirement. Consequently, futures on single stocks are merely a device to own or control the underlying instruments with more leverage than is ordinarily available.

It should be evident that this can become a very dangerous activity. Consequently, one should not be surprised to discover that this area has one of the most rapid growth rates of any of the newly created financial instruments. In March 2006, 395,988 such contracts traded on One Chicago. The compound annual growth rate of this activity since inception has been 88.1%. The compound annual growth rate for the past 36 months has been over 70.8%. Open interest has essentially doubled in the past 12 months.

It is evident that single stock futures are more attractive than margin debt. Margin debt, as calculated by the NYSE was at the level of \$222 billion in February 2006, which is the most recent available figure. This is consistent with underlying equity value of \$444 billion, assuming a 50% margin requirement. This figure can be translated into an equivalent open interest figure for One Chicago if all margin debt



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became single stock futures open interest. In such a circumstance, One Chicago open interest would be roughly 10 million contracts as opposed to the current open interest of roughly one million contracts. It would entail a 10-fold expansion at One Chicago. At the current rate of growth this could be accomplished within 48 months.

At the current rate of activity, open interest turnover is at an annual rate of 540%. This is roughly 5 times the level of current New York Stock Exchange turnover. Most participants in single stock futures trading assert that the various instruments are being used for hedging purposes and not for speculative purposes. It is merely interesting to observe that hedging or risk control activity seems to generate more turnover than ordinary investment activity. However, this evidence is entirely consistent with the experience of bond hedging activity conducted at the Chicago Board of Trade as noted in Section II of this paper.

## **IV - The Theory of Hedging Equivalence**

It may seem that the continued use of the term “croupier” in preference to the other less pejorative and more obvious terms betrays the bias that the development of new alternative trading or hedging securities is not necessarily a long term positive development for financial markets. Indeed, it should be manifest that possibility for widespread abuse with more unfortunate economic consequences does exist. Moreover, the emergence of a “croupier” class of entrepreneurs whose only function is to encourage financial market participants to engage in ever more exotic and larger financial transactions may serve to concentrate capital upon zero sum trading actions rather than wealth creation activities.

Nevertheless, it can be asserted with equal vigor and perhaps even more persuasiveness that new “hedging” instruments are merely mechanisms with which investors can properly manage portfolio risk. The increased trading volume associated with such instruments only contributes to the depth and liquidity of financial markets and as such is an element of enhanced market stability. Of course, it is also a source of enormous return on equity for the typical croupier. For instance, the Chicago Mercantile Exchange might well achieve a 34% return on equity in 2006. The expected return on equity for Google in 2006 should slightly exceed 25%.

However, none of this is important for the purposes of this paper. If these new instruments enhance the risk/reward balance of portfolios and produce a positive good, then these will become universally used. If these new instruments are simply opportunities to engage in fruitless trading at best and serious abuse at worst, then ultimately these will fall into disuse. Thus, the world of portfolio management cannot remain only in part users of such devices. The field must either adopt universal usage or reject such usage. Therefore, another theorem can be stated as follows:

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*Risk control as currently practiced will either be universally accepted or universally rejected.*

If the instrumentation and impedimenta of modern risk control achieves universal acceptance, the already high returns on equity of many “croupier” companies will markedly expand from already elevated levels.

### Afterthought:

Whatever might occur in the future with regard to publicly traded exchanges will probably occur quickly and upon a very large scale. Consider these few recent developments:

1. The Chicago Board of Trade in cooperation with the Singapore Exchange plans to open a joint Asian Derivatives Exchange in the third quarter of 2006, to be hosted upon the CBOT electronic trading platform. If successful, the CBOT will effectively become a 22-hour Trans Pacific Derivatives Exchange.
2. The New York Mercantile Exchange (NYMEX) plans to combine with the Dubai government to create the Dubai Petroleum Exchange. NYMEX will also make its energy trading futures available for trading on the Chicago Mercantile Exchange Globex Platform.
3. The London Stock Exchange might merge with either NASDAQ, Euronext or possibly even the New York Stock exchange.

The exchanges are establishing the ability to conduct business upon a far more expansive scale. Moreover, it appears that, at least among the primary global exchanges, there is a concerted effort to cooperate rather than to compete.