Chicago and Illinois already have one of the Largest Casinos in the World: We don't need another Casino, We need to Tax the One We Have!

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CPEG
Chicago Political Economy Group

By Ron Baiman and Bill Barclay

Executive Summary

Chicago already has one of the biggest "rich person" casinos in the world but it is hardly taxed at all.

Assuming that both rich and poor person casinos in Illinois pass tax costs on to their customers, "traders" at Illinois' rich-person casinos: Chicago Mercantile Exchange (CME), the Chicago Board of Trade (CBOT) owned by the CME, and the Chicago Board of Options Exchange (CBOE) pay state taxes that are at most equal to 0.000014% of the nominal value traded, more than 200,000 times lower than the 3.2% state tax per dollar wagered by "gamblers" at Illinois' 10 poor-person riverboat casinos.

Illinois' riverboat casinos pay about 35% of the 9.165% cut that they take per dollar gambled in state taxes. Illinois financial trading exchanges pay at most 7%, of the 0.00038% in transaction fees that they assess per nominal dollar traded, as Illinois state taxes.

This difference is *not* due to the fact that the rich-person casinos can easily move out of state and poor-person casinos cannot. A carefully designed very slight $1-$2 per-contract "LaSalle Street Tax" (PST) excise fee on some of the products traded at Illinois rich-person casinos, a fee that would still leave the overall cost of trading below what it was a decade ago, could generate up to $ 10-12 B for Illinois including $ 1-2 B for the City of Chicago. Such an LST would not cause the traders, the exchanges, or their switches to move out of state for the following reasons:

a)   The CME Group owns the CME and CBOT and would not pay the LST which is assessed on traders, not the Exchanges. Similarly, the CBOE would not pay the tax because it too would be assessed on traders.

b)   The products that are proposed to be taxed are not traded on any other exchange. Thus traders at the Chicago exchanges cannot currently trade these products anywhere else. Some of the products that would be taxed, such as the S&P 500 index futures and options, are exclusively licensed to these exchanges. While another exchange could seek regulatory approval to trade some of the other products, doing so would take a lengthy period of time.

c)   Moving trading liquidity from one market to another would be a difficult achievement, defying the classic *collective action problem*. To induce an individual trader to move, there must be a critical mass of other traders to trade with. A large number of traders must move together for there to be adequate "liquidity" at the new exchange to support trading. *Once one exchange has captured all the volume in a product, later entry is extremely difficult even when such an effort is backed by major financial institutions.* The 2011 failure of the Electronic Liquidity Exchange (ELX) that charged $ 1.25 - $2.00 less in transactions fees than the CME and CBOT is an example of this.

d) Moving electronic trading platforms out of state would similarly be fraught with difficulty. The expense of relocating all the hard-wired trading infrastructure would have to be justified economically, and a critical mass of affected traders, especially "High Frequency Trading" (HFT) firms and the exchanges would have to *collectively organize* to move all their switches and lines together *at the same time* without major disruptions to other traders. The phenomena of "co-location" has dramatically increased the costs and difficulty of implementing any geographical move by exchanges and traders.

e) It is reasonable to assume that the $1 or $2 LST fee will not have a significant trading volume impact on the vast majority of traders *not* making a large number of trades per day, or per month. Indeed, there is little evidence that Financial Transaction Taxes (FTTs) that are considerably higher than the proposed LST $ 1 or $2 per contract excise fee have resulted in significant volume suppression in large and established exchanges. The one case, often cited by Financial Sector Lobbyists, where the tax was repealed due to volume suppression is that of Sweden where a relatively high financial transactions tax was imposed on a small exchange trading in products for which traders had numerous other lower tax exchange options.

f) It is possible that a substantial share of HFT trading would become unprofitable under the proposed $1 - $2 dollar LST. Our policy preference, like that of many other financial transactions tax supporters, would be to suppress HFT trading as we believe it is fundamentally detrimental to the broader economy. In fact abundant evidence suggests that suppressing, or getting rid of, HFT trading on the Chicago exchanges should be welcome by non-HFT traders as it could reduce non-HFT trading losses by roughly the amount of profit currently being made by HFT traders. However, it may be difficult for a local financial transactions tax like the LST to accomplish this goal as significant HFT trading suppression might provide sufficient economic incentive for the exchanges' management (and in particular their HFT-connected Board Members) to endeavor to move trading switches out of state. If retaining much of HFT trading is taken as a policy goal, an alternative way to structure the LST would be to tier the rate by holding time. For example, very short-term positions, perhaps those held less than a minute, could pay $0.10, with the LST rate stepped up as the holding period increased. With the appropriate tiered LST rate structure, it should be possible to raise a similar amount of revenue while the rate, calculated against the contract value and holding time, would still favor longer term positions, because the holding period rate of the LST could also be structured to decline for longer holding periods.

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1) Introduction

Chicago already has one of the biggest "rich person" casinos in the world but it is hardly taxed at all. We need to raise taxes on the casino we have rather than further regressively taxing the mostly working class patrons of "poor person" casinos. Chicago's "Rich person casino," the Chicago Mercantile Exchange (CME), the Chicago Board of Trade (CBOT), owned by the CME, and the Chicago Board of Options Exchange (CBOE), together constitute one of the largest financial trading markets in the world.

2) Poor Person Casino = Massive Taxes, Rich Person Casino = Almost No Taxes

In 2014 CME Group (owner of the CME and CBOT) reported before-tax Operating Income of $ 1,601 M on Total Revenue of $ 2,936.3 M. That year CME reported paying taxes of $ 622.9 M (and another $ 1.3 M adjustment) for an after-tax income of $ 976.8 M and net profit margin of Total Revenue of 33%.[1] Similarly, CBOE reported 2014 Adjusted Operating Income of $ 318 M, Operating Revenues of $ 617 M, and Adjusted Net Income Allocated to Common Shareholders of $ 194 M for a net profit margin out of Operating Revenues of 31.4%.[2] Thus if we assume that in 2014 both the CME Group and CBOE paid the full 7% Illinois Corporate Income tax on their gross incomes, these Illinois "rich-person casinos" would have paid state taxes of 7% on their before-tax incomes of $ 1,601 M + $ 318 M, or $ 134.3 M.[3]

Illinois "poor person" (Riverboat) Casinos on the other hand paid a roughly 35% tax rate ($ 557.9 M state and local taxes on $ 1.594 M adjusted gross receipts in FY 2013.[4] And this 35% take for state and local governments is a highly regressive tax that is probably borne almost entirely by the mostly working class gamblers who frequent these Casinos. Given an average Illinois slot machine Riverboat Casino payout ratio in FY 2014 of 90.835%, "Gross receipts" at Illinois' Casinos, or the amount that gamblers wager without deducting "prizes" or payouts, were roughly $ 1.594 B/(1-0.90835) = $17.39 B. Assuming that these Illinois poor-person Casinos fully pass tax costs on to their customers, the $557.9 M of state and local taxes paid in Illinois riverboat casinos works out to a casino sales tax of about $0.5579 B/$17.39 B = 3.2% *on total dollars wagered* by gamblers in these "poor person" casinos.[5] The $ 1,594 M total FY 2013 adjusted gross receipts collected by these casinos represent $ 1.594 B/$ 17.35 B = 9.2%. Thus poor-person casinos take a cut of about 9.2% of total wagers, 35% of which goes to the state for taxes.[6]

Assume that CME's taxes are also ultimately borne entirely by CME traders. As the nominal value of the wagers at the CME Group and CBOE are more than $ 937 T (more than 10 times world GDP), the comparable state tax on traders at the CME Group and CBOE is roughly $ 134 M of $ 937 T = 0.000014% or basically nothing.[7] These rich-person casinos take a cut of only about $ 2.94 B + $ 0.6 B = $ 3.6 B (see Total Revenue and Operating Revenue data above) divided by $ 937 T, or 0.00038% of wagers, which is

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[1] http://files.shareholder.com/downloads/CME/277693832x0x807539/6645B9C1-F217-4A7D-B415-12BDB2407984/CME_News_2015_2_5_General.pdf .

[2] http://ir.cboe.com/~/media/Files/C/CBOE-IR-V2/documents/annual-proxy/2014-annual-report-form-10k.pdf .

[3] This is probably a substantial overestimate as CME's state taxes were cut roughly in half in 2011, see: http://articles.chicagotribune.com/2011-12-16/business/chi-quinn-signs-searscme-tax-breaks-into-law-20111216_1_cme-and-cboe-sears-cme-employee-income-taxes .

[4] According to COGFA p.13-14: http://cgfa.ilga.gov/upload/2013wagering_in_il.pdf

[5] http://www.americancasinoguide.com/slot-machine-payback-statistics.html#Illinois

[6] 35% of 9.2% = 3.2% .

[7] $ 923 T is the product of Average Contract Value $285,957 times Total Contracts Traded 3,277,423,779, both averaged for years 2010 – 2013 in Figure 1 below.

roughly 23,951 times smaller than the 9.2% share going to the "house" in poor-person casinos. Thus the 3.2% taxes and 6.0% casino cut on total wagers paid by gamblers in poor-person casinos *are roughly 23,951 times higher* than 0.000014% taxes and 0.00038% transaction fees = 0.00040% on contract notional value paid by gamblers in rich-person casinos like the CME, CBOT and CBOE. On a per dollar wagered basis, "gamblers" at Illinois poor-person casinos thus pay approximately 223,810 times more in state and local taxes than "traders" at Illinois rich-person casinos.[8]

Yes, you might say, it's obviously unfair that working class gamblers pay huge taxes and fees and rich gamblers pay basically nothing in taxes and have fees that are tens of thousands of times lower, but there is nothing that Illinois can do about it as a local financial transactions tax, or LaSalle Street Tax, of any significant amount would cause the traders, the exchanges, or their switches, to move out of state.

But, as will be explained in detail in section 3) below, this is not true.

A LaSalle Street Tax (LST) such as the one proposed in HB0106 would apply a $1/contract fee on all agricultural futures and futures options and a $2/contract fee on all other futures and future options and stock index options traded at the CME, CBOT and the CBOE.[9] Using publicly available data we estimate that from 2010 to 2013 such a tax would have generated an average of $ 11.8 billion per year for the state of Illinois (or for Chicago if the state's 1980 stripping of "home rule" power for a Chicago LST tax was rescinded[10]) under a no diminishment of trading assumption – see last row in Figure 1 below. The LST tax would raise total taxes *and* fees paid by gamblers in rich-person casinos from roughly 0.00040% to 0.0017% of nominal trading value, so taxes and fees for rich-person casino gamblers would still be roughly 5,551 times lower than the taxes and fees currently paid at poor-person casinos.[11]

As shown in Figure 1, from 2010 to 2013 the size of the average taxable agricultural contract on the CME or CBOT was $73,725. A $1 LST fee would have amounted to a 1.36 thousands of a percent (0.0013564%) sales tax on these products. Similarly, the average taxable non-agricultural contract subject to the proposed LST was $335,719 so that a $2 LST would amount to a mere 5.96 ten-thousands of a percent (0.0005957%) sales tax on these products. These rates can be put in context by comparing them with the 6.25% sales tax paid by Illinois residents when purchasing other goods and services.[12]

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[8] 3.2/0.0000142979 = 223,809.5. Currently traders on Chicago's financial exchanges pay no local sales taxes. The exchanges may pay some local property tax but the amounts involved would not greatly alter the billions and trillions of dollars involved in these comparisons. In 2012 the CME was awarded TIFF subsidies which it turned down after its 2011 income tax break:
http://www.chicagobusiness.com/article/20120130/BLOGS02/120139966/cme-to-reject-15-million-in-city-tif-funds .
[9] See: http://www.cpegonline.org/wp-content/uploads/2015/02/LST-for-IL-QandA.pdf for a description of the details of HB0106.
[10] http://chicago.suntimes.com/uncategorized/7/71/194804/its-fine-to-tax-main-st-but-hands-off-la-salle/ .
[11] $ 11.8 B / $ 923 T = 0.0013%. 0.00040% + 0.0013% = 0.0017% fees and taxes at rich person casinos assuming maximum LST tax revenue. Assuming fees and taxes at poor-person casinos are 9.2%, rich-person casino fees would still be 9.2%/0.0017%= 5,551 times lower than fees and taxes at poor-person casinos.
[12] http://www.americangaming.org/industry-resources/state-information/illinois . If financial traders had to pay a 6.25% sales tax on their trading purchases, the LST would raise %6.25 of $ 923 Trillion in nominal trading value or about $ 58 Trillion, more than three times total U.S. GDP. Nobody is suggesting a LST sales tax at this level, but this does not mean that a ridiculously low LST of $ 0.01 per contract makes sense!

Figure 1: 2010 – 2013 Agricultural and Non-Agricultural Contracts Subject to LST
Average Value of Contract, Number of Contracts Traded, Total Unsuppressed LST Revenue

YEAR	2010	2011	2012	2013	Average
Average Non-Ag Contract Value	$376,848	$340,217	$313,133	$312,677	$335,719
Average Ag Contract Value	NA	$74,628	$71,618	$74,929	$73,725
Average Contract Value	$293,122	$281,160	$309,252	$260,293	$285,957
Total Contracts Traded	3,286,822,896	3,681,185,412	2,605,232,280	3,536,454,526	3,277,423,779
Non-Ag Contracts Traded	2,556,570,079	2,862,624,492	2,388,851,082	2,757,254,341	2,641,324,999
Ag Contracts Traded	730,252,817	818,560,920	216,381,198	779,200,185	636,098,780
Total Unrepressed LST Revenue	$11,686,785,950	$13,087,619,808	$9,988,166,724	$12,587,417,734	$11,837,497,554

Sources: All volume data from World Federation of Exchanges annual reports. The 2013 Annual Report is here: http://www.world-exchanges.org/insight/reports/2013-wfe-annual-report.

A recent Sun Times editorial claimed that the maximum viable LST that could still manage not to drive away the Exchanges would be but in the range of 1 -3 cents on a dollar generating only $38 to $ 100 million.[13] As has been noted we disagree and will explain why in section 3 below. However, even if the Sun Times was correct, obscenely wealthy financial gamblers should be shamed for not contributing any significant public revenue and passing the entire gambling tax burden on to mostly working-class gamblers. Unfortunately, at least in Illinois, they seem focused on further crushing the poor, and working and middle classes, and consolidating U.S. plutocracy by buying political power, destroying unions, and eviscerating what's left of social spending.

3) A Multi-Billion dollar LaSalle Street Tax Will Not Cause: Traders, Exchanges, or Switches, to Move Out-of-State

A multi-billion dollar LST will not cause either traders, exchanges, or their switches to move out of state for the following reasons:

a) The CME Group owns the CME and CBOT and would not pay the LST which is assessed on traders, not the Exchanges. Similarly, the CBOE would not pay the tax because it too would be assessed on traders.

b) The products that are proposed to be taxed are not traded on any other exchange. Thus traders at the Chicago exchanges cannot currently trade these products anywhere else. Some of the products that would be taxed, such as the S&P 500 index futures and options, are exclusively licensed to these exchanges. While another exchange could seek regulatory approval to trade some of the other products, doing so would take a lengthy period of time.

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[13] http://chicago.suntimes.com/politics/7/71/367925/lasalle-street-tax-fairy-tales .

c) Moving trading liquidity from one market to another would be a difficult achievement, defying the classic *collective action problem*. To induce an individual trader to move, there must be a critical mass of other traders to trade with. So a large number of traders must move together for there to be adequate "liquidity" at the new exchange to support trading. *Once one exchange has captured all the volume in a product, later entry is extremely difficult even when such an effort is backed by major financial institutions.* For example, in 2011 the Electronic Liquidity Exchange (ELX) opened for trading offering many of the same products traded on the CME and CBOT – but with one significant difference: ELX charged $1.25 – $2.00 less in clearing and settlement fees to trade the same contracts as the CME and CBOT. ELX had another advantage: the exchange had the backing of JP Morgan Chase, Morgan Stanley, and Goldman Sachs. What happened? ELX's best volume was achieved when their monthly trades in some contracts almost equaled the daily trades in the same contracts on the CME. Clearly the $1 - $2 difference was not enough to overcome the collective action problem that arises when trying to move liquidity from an existing liquid market to a new, illiquid market.[14]

d) Moving the CME Group's electronic trading platforms out of state is similarly fraught with difficulty. The expense of relocating all the hard-wired trading infrastructure would have to be justified economically, and a critical mass of affected traders, especially "High Frequency Trading" (HFT) firms (see f) below), and the exchanges would have to collectively organize to move all their switches and lines together *at the same time* without major disruptions to most of the traders for whom a $1 or $2 fee per trade would be at most an unnoticeable statistical error. Hard-wired preferred access points closest to the new switch location for the most impacted "High Frequency Traders (HFTs – see f) below) would have to be collectively adjudicated between these traders and the exchanges, a process that could be laden with challenges as it would expose the privileged access to the current switching locations that these traders have invested in over the years.[15] Non-HFT traders might welcome getting rid of the HFT traders (see f) below) and oppose the major costs and disruptions of such a relocation because of a negligible $1 or $2 fee. The phenomena of "co-location" has increased the costs of any geographical move by exchanges and traders.

e) Although the Exchanges would not pay the LST, they make their money from fees on trading volume. They would thus be affected by an LST that causes a significant trading "volume suppression," or reduction in trading. Trading volume suppression from an LST will also affect LST revenue. It is reasonable to assume that the $1 or $2 LST fee will not have a significant trading volume impact on the vast majority of traders *not* making a large number of trades per day, or per month.[16] Would a farm family hedging the soybean crop with contracts worth

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[14] For a good treatment of the difficulties in moving liquidity, see Michael Gorham, "Product Innovation, Clearing and Competition among U.S. Derivatives Exchanges," available at: http://globalmarkets.jmls.edu/pdfs/product-innovation.pdf .

[15] In private conversations IT staffers have told us that HFT traders are constrained to setup their servers outside of a 1000 ft. (or something like this) zone from the central trading switches. One can imagine that the jockeying to set up servers at the edge of the permitted zone at new location could be intense.

[16] As indicated below estimates of HFT trades range from 18% to 50% of overall trading *volume* but as these are done by a relatively small number of HFT traders who sometimes execute thousands of trades a second, the number of HFT *traders* is relatively small compared to the overall number of traders.

between $30,000 to $50,000 risk falling prices before harvest because of an additional $1 to hedge 5000 bushels? Would the pension fund manager using S&P 500 futures to quickly invest new inflows of money be deterred by the $2 LST on a contract worth more than $100,000? What about the speculator who may take the other side of the trade with the farmer or the pension fund? For these traders a $1 or $2 fee is not likely to be a critical factor in deciding whether to buy or sell a contract costing tens of thousands, or hundreds of thousands of dollars. As shown in Figure 2 below, , the amount of the proposed LST is less than the smallest price change or "Tick Size" (the smallest amount a trader could gain or lose on these contracts) so it would provide very little incentive to trade elsewhere even if the same products were available on another exchange. Indeed, there is little evidence that Financial Transaction Taxes (FTTs) that are considerably higher than the proposed LST $ 1 or $2 per contract excise fee have resulted in significant volume suppression in large and established exchanges.[17] Finally, the $ 1 or $ 2 dollar increase in fees for traders would leave the trading commissions charged well below where they were only a decade ago and there is no indication that trading was suppressed at that time.

Figure 2: Smallest "Tick Sizes" for LST Taxable Products

	Livestock	Grains	
Tick Sizes - Ag Contracts	$10/contract	$12.50/contract	
	Interest rate	Equity	Energy
Tick Sizes - Non-Ag Contracts	$6.25 - $31.25 depending on the product	$12.50 - $25	$10/contract

Source: Tick sizes are from CME contract specifications: http://www.cmegroup.com/trading/products/

f) The traders who would be significantly affected by the LST would be "High Frequency Traders" (HFT) speculative traders who make a very large number of short-term (sometimes thousands of times a minute) trades. These are the true "rich person casino gamblers" as this kind of trading serves absolutely no direct economic purpose. For example, Citadel Trading, founded by CEO Ken Griffin, a major contributor to the campaigns of Rahm Emanuel and Bruce Rauner, has made astronomical profits from extremely high speed submission, cancellation and trading of the products available for trading on the Chicago markets and elsewhere. Extremely high speed means hundreds of bids and offers in as little as a second. When HFT first appeared in large amounts, the argument was advanced that this activity helped make the markets more liquid, allowing the farmer, the pension fund manager or the traditional speculator to buy and sell

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[17] http://www.imf.org/external/np/seminars/eng/2010/paris/pdf/090110.pdf . Table 1, p. 148-9 shows financial transaction tax rates for 24 countries as of 2010. All of them are orders of magnitude (as a percent of nominal trading value) larger than the $1 or $2 dollar LST fee and their little indication of a massive volume suppression affect. The one case, often cited by Financial Sector Lobbyists, where the tax was repealed due to volume suppression, is that of Sweden, where a relatively high financial transactions tax was imposed on a small exchange trading in products for which traders had numerous other lower tax exchange options, see for example: http://www.ft.com/intl/cms/s/0/b9b40fee-9236-11e2-851f-00144feabdc0.html#axzz3U0FuvyvR . See also point (6) of: http://www.cpegonline.org/wp-content/uploads/2015/02/LST-for-IL-QandA.pdf .

more quickly and at better prices. This claim has increasingly been challenged, and it faces a particular obstacle in derivative markets such as Chicago's. There is no new wealth created in the trading of derivatives. Wealth is simply transferred from one participant to another: The money I make on a trade, you lose (and vice versa). So, if HFT firms are profitable – and many are – those profits are coming at the expense of someone else. There is mounting evidence that HFT traders are *rogue gamblers* who engage in rigged and illegal trading strategies to enrich themselves at the expense of non-HFT traders.[18]

While public data on HFT trading shares and profits is hard to come by, recent (2012) estimates indicate that HFT trading is in the range of 50 percent of stock trading with some indications that this HFT trading volume share is declining.[19] A 2012 comprehensive academic study of HFT trading and profits indicated that:

> (1) HFT firms don't trade much with each other, such HFT-HFT trades represented only 18% of total HFT trading volume;
> (2) HFT firms make profits from other market participants;
> (3) On balance HFT firms take rather than provide liquidity. The latter point suggests that HFT - non-HFT trading would simply be replaced by non-HFT – non-HFT trading if HFT traders were not available; and,
> (4) Average HFT profits per trade for this 2010 sample of HFT trading in E-mini S&P 500 futures were $1.11, and median per trade profits $0.53. [20]

This suggests a $1 or $ 2 flat fee LST could result in significant volume (and LST revenue) suppression putting the currently less profitable HFT traders out of business. A significant suppression of HFT trading is also suggested by the current level of Chicago CME Group Exchange fees as indicated in Figure 3 below. As this could conceivably be a sufficient level of trade volume suppression to induce the traders or Exchanges to attempt to move, it might be politically expedient to restructure the LST to avoid this unlikely, though perhaps possible, outcome.[21] Our policy preference, like that of many other financial transactions tax supporters, would be to suppress HFT trading as we believe it is fundamentally detrimental to the broader economy. In fact, the evidence above suggests that suppressing, or getting rid of, HFT trading on the Chicago exchanges should be welcome by non-HFT traders as it could reduce losses to non-HFT traders by roughly the amount of profit currently being made by HFT traders. However, it may be difficult for a local financial transactions tax like the LST to accomplish this goal as significant HFT trading suppression might provide sufficient economic incentive for the

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[18] http://www.nytimes.com/2015/04/28/opinion/the-trader-as-scapegoat.html?_r=1 .
[19] http://www.nytimes.com/interactive/2012/10/15/business/Declining-US-High-Frequency-Trading.html?_r=1& and op. cit.
[20] Op. cit. p. 44.
[21] This is unlikely as the data suggests that HFT traders would not want to relocate unless they could get other (relatively unaffected by the LST) traders to move as HFT traders prefer not to trade with each other as they make more money by trading with non-HFT traders. The same consideration suggests that non-HFT traders may *not* be so keen to relocate to an Exchange with an even higher share of HFT traders and may be *positively* disposed to see the HFT traders go out of business or move elsewhere.

exchanges' management (and in particular their HFT-connected Board Members) to endeavor to move exchange trading switches out of state.[22]

If retaining much of HFT trading is taken as a policy goal, an alternative way to structure the LST would be to tier the rate by holding time. For example, very short-term positions, perhaps those held less than a minute, could pay $0.10, with the LST rate stepped up as the holding period increased. With the appropriate tiered LST rate structure, it would be possible to raise a similar amount of revenue while the rate, calculated against the contract value and holding time, would still favor longer term positions, because the holding period rate of the LST would decline as the holding period increased.[23] This would not be our first choice for a comprehensive LST because it would probably not significantly reduce HFT activity, but a local LST would increase the pressure for national and international financial transactions taxes that would be able to significantly repress HFT trading. Another approach would be to tax HFT at the full rate when they took liquidity and at a reduced rate when they provided liquidity.

Figure 3: CME Group Trading Transaction Fees and Commissions

	Ag	Non-Ag	
CME Customer Fees - Clearing and Settlement	$0.69/side	$0.40 - $0.80/side	
CBOT Customer Fees - Clearing and Settlement	$0.65 - $1.89/side	$0.50 - $1.50/side	
There is a range of fees depending on the specific product			
Member fees may be half or less than customer fees			
	Deep Discount	**Retail FCMs**	**Full Service FCMs**
Commissions	$0.60 - $2.99/side	$7 - $10/side	$30 - $50 round turn

Sources: For CME product fees see: https://www.cmegroup.com/company/files/2015-fee-changes-summary.pdf; for CBOT product fees see: https://www.cmegroup.com/company/files/CBOT_Fee_Schedules.pdf

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[22] http://www.cpegonline.org/workingpapers/CPEGWP2010-2.pdf . As a matter of broad public policy, we believe that a national, or international, a Financial Transactions Tax (FTT) should be designed in the opposite manner with a higher taxes on contracts held for *less* time, so as to suppress HFT trading. We believe an Illinois LST could provide a significant political impetus to enact a federal FTT that could be structured in this way.

[23] Alternatively, if the state is willing to accept a smaller take, the LST could be reduced to $0.50 and split half and half between Chicago and the State of Illinois so that each receives $0.25 per contract.

About the Authors:

Baiman and Barclay are both founding members of the Chicago Political Economy Group (CPEG) www.cpegonline.org .

Ron Baiman is currently Assistant Professor of Business Administration in the MBA program at Benedictine University in Lisle, IL. Baiman is an economist (Ph.D. in Economics from the New School for Social Research) who has worked for many years in state and local public policy, most recently as Director of Budget and Policy Analysis for the Center for Tax and Budget Accountability (CTBA) in Chicago.

Bill Barclay is currently an Adjunct Professor of Finance in the MBA program at the University of Illinois at Chicago. Barclay is a financial economist (Ph.D. in Political Economy from Michigan State University) who worked as a senior executive for 22 years at Chicago exchanges: the MidAmerica Commodity Exchange, CBOT, CBOE and Chicago Stock Exchange on: product development, strategic planning, and market research with exchange staff, members (individual and institutions), and regulators: CFTC and SEC, and is himself an occasional trader of derivative products.