# “Economic inefficiency and unconstitutionality of short selling and privileged private clearing house”


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# Economic inefficiency and unconstitutionality of short selling and privileged private clearing house


## Abstract

This paper proves that the prevailing system of short selling and privileged private market clearing is a negative-sum (inefficient) game which irreparably erodes the total accumulated capital of an economy and can cause catastrophic financial depressions, continually. Within the rule, the short-seller of financial securities creates more shares, surreptitiously, than the legally issued and outstanding number of shares of a company. This rule is illegal due to a violation of the Company Act, which (1) requires a company to declare the number of issued and outstanding shares in filings with security regulatory agencies like the United States Security and Exchange Commission; and (2) mandates that regulatory agencies monitor compliance by the issuers of the securities. The author also argues that short selling is sub-optimal for a democracy that follows a policymaking paradigm of balancing individual prosperity (of short-sellers) with social stability caused by systemic financial depression.


**Keywords:** short selling, economic efficiency, constitutionality, system of money and finance, great depression.
**JEL Classification:** D61, G01, G14, G18, G24, G38.

## Introduction

The Company Act in most countries stipulates stringent action against clandestine creation of new shares by transgressing the legally permitted number of shares. Share issuing companies are mandated to announce, publicly, any change in the number of their shares issued or outstanding by filing with the government security regulators – the Security and Exchange Commission in the United States and its counterparts in other countries. Companies are also legally required to promptly inform shareholders and investors about any changes in the number of shares through filing on time with the security regulators.

The practice of short selling of financial securities, however, creates new shares clandestinely by contravening the Company Act. An uptick rule was instituted in 1938 to avert the adverse effect of short selling on financial depressions. The uptick rule requires that a security cannot be sold short when its price is falling. Despite the uptick rule, short selling in the real world has created more shares of securities of many companies than the number of legally outstanding shares for those companies under the Company Act.

The security regulators have tacitly granted permission for such clandestine creation of shares through short selling. The argument made in favor of short selling is that it is necessary for hedging of risk by traders. The tacit permission for creation of new securities, however, contravenes the Company Act and breeches the contract between a company and its shareholders with respect to the number of legally issued and outstanding shares.

Brokerage houses help short-sellers borrow shares from legal shareholders to sell them in the open market. Oversupply of shares created by short selling depresses the stock price and often creates panic among shareholders. The panicking shareholders sell off their shares at deep loss to the short-sellers.

The short selling practice offers a golden opportunity to brokerages and their affiliate hedge funds to sell any security they do not own after borrowing the same from their account holders who legally own the same in most margin-enabled accounts. Besides, mutual fund companies can lend their shares for short selling by their affiliated hedge funds[1].

The brokerage account holders pay their brokerages commissions on trading and fees on maintaining accounts, while facing the possibility of declining stock value due to short-sellers. The short-sellers profit from first selling at higher prices the shares they did not own but borrowed from legal owners and then buying the shares back from panicking legal owners at lower prices.

The Company Act stipulates a publicly traded company to legally declare the number of shares outstanding. The number of shares of the company is a legal contract between investors in the company's stock and the company. The security regulators are required by law to monitor and enforce that companies declare, publicly through filings, any changes in the number of their shares outstanding. But short selling creates more shares than the legally slated outstanding number of shares, as the short-sellers borrow the shares from legal owners and sell the

[1] This may explain why hedge fund managers and mutual fund managers are earning exponentially rising incomes while most such funds perform badly as compared to the market and the vast majority of households face declining household wealth.

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same to increase the supply of shares. The security regulators permit such creation of shares that the company did not have included in the outstanding number of its shares. The regulators thus contravene the Company Act, instead of enforcing and monitoring the outstanding number of shares.

Security regulators rightly penalize company managements for any clandestine creation of shares through stock options. But the creation of shares through short selling is a very widespread and treacherous act permitted by the security regulators by remaining oblivious of illegality.

The illegal creation of shares is designed and practiced (as a deliberate strategy, which is not conspiracy) to transfer wealth of passive investors − pension plans and snoozing brokerage accountholders who own legally issued company stock − to short-sellers. Such transfer of wealth from legitimate shareholders to short-sellers through the short-selling practice is illegal vis-à-vis the Company Act. The short-selling practice must, therefore, be discontinued under the current rules of governance.

The argument that short selling facilitates liquidity is specious. Institutions holding large short positions trade like the legal shareholders to extract wealth from short-term holders of a security. The goal of short-selling institutions is to depress the price to enhance the value of their portfolios, while earning from bid-ask spread in trading on short side with the legal shareholders. Creation of short shares clandestinely lowers the stock price more than that possible if the extra shares were not created due to the permission for short selling. The prevailing argument that short-sellers provide liquidity is moot, because the practice itself is illegal and designed to rob wealth from passive investors.

## 1. New paradigm to judge optimality

The preceding section leads to an important question: Should the Company Act be amended to allow short selling of financial securities? This question can be answered only within an economic paradigm that can predict whether or not short selling is optimal.

The current paradigm for economic policymaking is maximization of individuals' utilities of wealth. This paradigm ignores deleterious consequences on humanity due to individuals maximizing their utilities of wealth.

For example, lobbyists acting for brokerages can bribe the lawmakers to amend the Company Act to legitimize the short-selling practice to continue clandestine creation of securities. The brokerages can also entice the lawmakers to invest in their hedge funds to wangle wealth from passive pension plans and snoozing brokerage account holders. The lawmakers and brokerages are thus acting within the current paradigm to maximize their utilities of wealth. Many ordinary traders too can think of benefitting from the new short-selling law that legitimizes the current practice and of lobbying against banning the practice.

The short-selling practice, however, (a) makes the vast majority of ordinary investors-workers who cannot trade full time the biggest losers, and/or (b) turns most such workers as traders to try to wangle others' wealth or at least watch against being robbed. The short-selling law will thus weaken the productivity and competitiveness of society: either when the passive investors are depressed due to loss of their hard earned savings or when they become traders by neglecting their productive work. Neglecting work can thwart a country's production of globally competitive goods, services and ideas that generate net exports for a stronger currency and lower costs of livings and higher wages.

It is possible that the average American investor-worker has already become a trader in the financial markets to make USA the largest net importer ($750 billion annually) with negligible foreign exchange reserves and weakening currency. Whether the short selling practice has made the average American a trader is difficult to answer. But optimality of the short selling practice cannot be deduced from the current economic policymaking paradigm.

The current paradigm induces or brainwashes even the smart people to behave myopically and to undertake actions that are detrimental to humanity in the long run. A famous economist has said that every individual is dead in the long run and so what matters to him is the utility of his wealth during his lifetime. But rules of governance derived from such myopic economic paradigm or thinking can make even the talented individuals ineffective, i.e., unable or unwilling to produce globally competitive goods, services or ideas. Such a paradigm leads to: (1) wars by amassing mutually destructive weapons of mass extinction; (2) global warming; (3) depletion of ground water or pollution of surface water; (4) exhaustion of nonrenewable resources like oil and minerals; and even (5) inability of a nation to generate net exports.

Optimal rules of governance like on whether or not to permit short selling have to achieve national goals of unity, stability, universal prosperity and competitiveness. They must be so comprehensively articulated that vested interests including the political party establishments, religious gurus, academic professors, government establishments or anyone else-

cannot reject such rules without publicly exposing themselves as opponents of national goals. Optimal rules for nations should lead to stability and prosperity of humanity. The new paradigm to frame optimal rules of governance should be adopted on the basis of enhancing unity, stability and competitiveness to beget individual prosperity, to the extent feasible.

America is a nonpareil fountainhead of equal opportunity for individuals to thrive based on talents, skills and perseverance. But the pre-Great Depression era short selling practice creates unequal opportunities for a few, who are ineffective in producing globally competitive goods, services and ideas. The few has foisted this practice for self-enrichment at a huge cost to the majority. It has forced a democracy to protect the best interest of a few by obliviously sapping the vitality of a great nation.

Most of the benefits of short selling are likely to accrue to the clearing house members (the largest banks) and their allied hedge funds with real-time access to data on legal owners and, more crucially, on other short-sellers. Information about short-sellers is not available to traders, investors and regulators, except the clearing house members. The clearing house members and their hedge funds have access to the cheapest insured funds as well as Federal Reserve discount window lending.

As long as the clearing house members and their allied hedge funds strategically trade in concert, they create sufficient volatility (like raising NASDAQ index to 5000+ and bringing down to 1000+ in a year, 2000 to 2001) to wangle away wealth from most other traders and investors who have little access to cheap funds or real time information on short and long holders of securities. After other traders and investors with limited access to cheap funds and to private clearing house data are financially enervated, the mega clearing house members trade against each other which leads to a mutual destruction of hard-earned capital as happened during the Great Depression and in the financial catastrophe of 2008, which was termed by the Federal Reserve as worse than the Great Depression[1].

Short selling within the current system of money and finance, thus, leads to financial instability in the long run. Short selling is, therefore, suboptimal for an economy.

Without the privileged access to cheap money or to real-time information about other traders (investors and short-sellers) due to their control over the clearing house, the clearing house members cannot easily succeed in wangling away wealth from others. In such a case of symmetry of access to cheap money and real-time information on long and short holders of financial securities, short-selling may cause only stock price volatility, not definitive direction in price move as the short-sellers can often get squeezed.

## 2. Unconstitutionality and economic inefficiency

This section delves into economic inefficiency and unconstitutionality of short selling in an economy characterized by the prevailing system (rules) of money and finance which govern the real-world capital markets.

The economy is assumed to comprise: (1) financial and nonfinancial firms; (2) leveraged households; (3) a government; (4) risky financial assets like stocks and bonds; (5) risky real assets like gold; silver and real-estate; (6) safe deposits held in financial firms but insured by the government; (7) a private market clearing house (CH) with large financial firms as its members, and (8) a central bank (CB).

The existence of small financial firms who are not members of the clearing house does not make a difference to our conclusions because these firms are almost like non-financial firms without the privilege granted to CH members via rules described below.

**Definition 1:** Capital. The total capital of the economy is the monetary value of all assets and deposits minus the liabilities of all firms, households, central bank and government.

**Definition 2:** Efficiency. An efficient rule of governance is one which does not diminish the accumulated capital of the economy.

**Definition 3:** Feasible efficient rule. An efficient rule is feasible if its adoption involves no more cost than needed to pass and enforce the rule as law by the government. Infeasibility of adopting a rule is not determined by political costs or considerations.

**Rule 1:** Private market clearing. The financial markets in the economy clear through the private market clearing house (CH) comprising financial firms as its members. The financial firms are organized as holding companies with subsidiaries that trade and make markets.

**Rule 2:** Government insured deposits used for trading. The CH members hold government-insured deposits of households and non-financial firms at rates of interest set by the central bank (CB). The CH members can invest or trade on the basis of these deposits as well as funds borrowed from the CB.

[1] For more detailed arguments on this paradigm, see Acharya, S. (2011a), "Optimal Governance for Prosperity amid Stability," at http://pro-prosperity.com/Research/Prosperity%20amid%20Stability%20-%20A%20New%20Economic%20Paradigm.pdf.

**Rule 3:** Printing money by CB for CH members. The CB can create new funds (by printing money) to lend them to any CH member, e.g., whenever the CH member turns bankrupt due to lower value of its assets than its liabilities.

**Rule 4:** Guaranteeing solvency of CH members by the CB gifting away new capital when needed. The government borrows from the CH members at significantly higher rates of interest than the latter's cost of funds without any risk borne by the latter for such borrowing. The cost of funds to the CH members is set by the CB. The CB lends at lower interest rates and also forces households and financial firms to lend their insured deposits at lower rates to the CH members, while the government borrows these funds at significantly higher rates. The spread between the rates at which CH members lend to the government and borrow from CB and non-financial firms and households generates the new capital give away to the CH members. This rule guarantees solvency of CH members to retain perpetual control over all safe funds of the economy to take far greater leveraged bets on risky assets than anyone else in the economy can undertake.

**Axiom 1.** Asymmetry of information and resource. The CH members observe the real-time asset holdings (short and long positions in securities and contracts on real assets) of all non-financial firms and households. CH members' real-time asset holdings (short and long positions) are observed by none other than these members. The law in the USA does not require disclosure of short positions by households and firms, but the private CH allows its member firms to have full access to such information. The law in the USA requires that those, who hold long positions equal to more than 5% of all outstanding shares, report the same to the Security and Exchange Commission periodically, but this is not the real-time data on asset holdings which only the CH members can observe.

**Axiom 2:** Trading for profit and bonus at financial firms. The financial firms (clearing house members) trade all kinds of assets for short-term profits and pay off the profits as dividends or executive bonuses and salaries.

**Axiom 3:** Traders. Some households and non-financial firms in the economy invest their funds in risky assets like financial securities to trade for profits and are swayed by news and rumors about rising or falling prices.

**Axiom 4:** Non-traders. There are some households and non-financial firms which invest their savings in either safe deposits and/or risky real assets like gold, silver or real-estate for the long-term, without ever trading for profits and without ever being swayed by rumors or news about rising or falling prices of these assets. For example, most people in China and India hold bank deposits and/or buy real assets like gold, silver, land and property without ever selling the same or being swayed by short-term price swings or rumors about prices.

**Rule 5:** Short-selling. Everyone including the CH members can sell securities and contracts on real assets short.

**2.1. Principal-agent paradigm and moral hazard.** Rules 1 through 4 and Axiom 1 make the CH members and the CB the *agents* of the economy and the non-financial firms and households which create wealth the *principals*, as in a standard *principal-agent paradigm*. The agents fully control the welfare of the principals. The agents are guaranteed to stay solvent, control all safe deposits and use these deposits to take on large leveraged bets for trading against households and non-financial firms. The agents can thus control the prices of risky securities, value of the fiat currency (inflation) and flow of profits to their private coffers with the risk piling on the principals. This creates the most dangerous problem of *moral hazard*, which is an academic euphemism for blackmailing of non-financial firms and households.

**Theorem 1.** Suppose that the economy is governed by Rules 1 through 4 and that Axioms 1, 2 and 3 hold. Then Rule 5 can make: (1) the prices of risky securities highly volatile; (2) the CH members reap enormous profits for hefty executive bonuses and stock dividends; (3) the non-financial firms or non-CH small financial firms and households lose massive amounts of their accumulated capitals; (4) the total capital of the economy shrink dramatically (making Rule 5 economically inefficient); and (5) deflate asset values, leading to insolvency of even the CH members with the CB creating enough new money (on the back of the bankrupted households and non-financial firms) to restore solvency of CH members.

**Proof.** We need to construct examples to prove the theorem in parts. These examples are indeed from the real-world experience revealed during the 2008 financial catastrophe.

**Example 1: AIG-GS.** A CH member (Goldman Sachs) signs an agreement to buy put option contracts (Credit Default Swaps) on mortgage securities from a firm (AIG) which is not a CH member. The CB (Federal Reserve) has ex ante assured solvency of GS, but not of AIG. Any rise in the market price of CDS will be settled in favor GS, and any fall in the market price of CDS will be settled in favor AIG under the agreement.

The value of a put option (CDS) rises if the market price of the underlying mortgage security falls. To

maximize profits under its contract with AIG, it pays GS to sell the underlying mortgage securities short to lower prices by artificially creating these securities without even risking its funds. The only way AIG can avert losses in this such trading under its agreement with GS is to buy the artificially created (toxic) mortgage securities from GS as GS dumps more and more of the toxic (short-sold) securities in the market. But a vulnerable AIG has no access to unlimited cheap funds from CB or insured deposits to counter GS' strategy:

1. Due to creation of non-existing mortgage securities by GS, the prices of these securities and of CDS can be very volatile.
2. GS can reap enormous profits to pay hefty executive bonuses by usurping the accumulated capital of AIG and of investors locked in AIG stocks and bonds.
3. As a non-CH firm, AIG gets no guarantee for its existence from the CB. AIG loses all its accumulated capital due to short-selling by GS. AIG stocks and bonds lose value due to short-selling by GS and other CH members who have access to real-time short selling data maintained by the CH. CH members make some profits from trading, but this is miniscule as compared to the gargantuan losses to households and nonfinancial firms who are wiped out of their investments in AIG stocks and bonds.

It is not a zero-sum game between shorts and longs. To see this, suppose that $P$ is the price per share when $N$ shares are outstanding and issued by a company before any short position is established and suppose that $n$ shares are sold short at $P$ per share. Assume first that the price does not fall due to short-sale. After the short-sell, $n$ new shares are created, raising the number of shares held by longs to $N+n$. The shorts have cash $nP$ from selling but have an obligation to buy back $n$ shares. If the price does not change due to short-selling, the shorts will have to cover by buying $n$ shares by giving up their cash $nP$ to meet their obligations. Thus, if the price is unchanged due to short-selling, neither the shorts nor the longs make any profit, except incurring transaction costs.

If the price moves through a zero-drift random walk process, as a result of short-selling, then there will be no expected net profit for either shorts or longs.

Only if some shorts can orchestrate a negative drift in price after selling short and other market participants are less informed or less resourceful to learn this on real-time, can the short-sellers make net profits? Only the CH members under Rules 1 though 4 and operating with Axioms 1 and 2 have the advantage and resource to orchestrate such negative drift. Even then, the loss to longs will be far greater than the net profits made by shorts. To see this, suppose that the price falls from $P$ to $p$ after the $n$ shares are sold short at $P$ per share and that shorts buy back the shares at $p$ to cover their obligations. The shorts earn profits $n(P - p)$, but longs incur a far bigger loss equal to $(N + n)(P - p)$.

4. The loss of accumulated capital of the economy due to short selling is $N(P - p)$, which is the difference between the loss to longs, $(N + n)(P - p)$, and gain to shorts, $n(P - p)$.
5. In the AIG-GS example, massive short-selling of mortgage backed securities depresses the market prices of all rated classes of mortgage securities including those held by GS. Since the GS marks-to-market its assets, it sees a decline in asset value and negative capital. But the guarantee by the CB helps GS to stay afloat.

Here is another example (based on inexact figures) to show how short selling within the current system of money and finance can adversely affect the economy, as outlined in Theorem 1[1].

**Example 2:** JPM-WM. JP Morgan and Chase conceives of a plan (Project West) to acquire a successful, well-capitalized and valuable bank, Washington Mutual Bank (which is a subsidiary of Washington Mutual Incorporated, a bank holding company), to expand its operations to western parts of the United States. At this time, mutual funds passively hold 90% of 1.7 billion common shares of WMI.

JPM then floats its interest in buying WMI. It does so to facilitate short selling of 1.5 billion shares of WMI common stock. JPM creates these shares synthetically or by pulling out of thin air. The Clearing House controlled by JPM does not question JPM on non-delivery of shares sold short. JPM sells these shares to the passive mutual funds, pension plans and individual investors. No buyer suspects anything when JPM has expressed interest in WMI.

JPM simultaneously buys 500 million WMI shares through some of its subsidiaries. JPM has to buy some and sell more to entice other buyers through talks of buying WMI. At the end of the trading, JPM holds 1.5 billion shares short in its private trading-inventory account and 500 million shares long in its investment account. JPM files its long positions with the SEC and wins confidence of all other mutual fund holders.

JPM has helped create a rule to not let regulatory agencies inspect its trading-inventory account held in its market making subsidiary. JPM has successfully justified and lobbied for keeping such accounts ultra secret.

[1] This example is taken from Acharya, S. (2012b), memo entitled, "Unconstitutionality of Short-selling and Private Market Clearing," submitted to the US Congress and President, available at http://pro-prosperity.com/UnconstitutionalityOfShortsellingAndPrivateMarketClearing.html.

At the time of constitution of the BOD and appointment of key personnel like the Finance Director of WMI, JPM now dangles its long positions of 500 million shares to project its weight as a benevolent large shareholder of WMI seeking to place its people in a company planned to be acquired.

JPM then obtains all important data to make a low-ball offer of $8 per share to buy WMI. But the WMI CEO refuses. Then JPM appointed WMI BOD fires the CEO with a golden parachute to replace him with a pliant CEO to serve JPM's interest.

JPM then uses its long and short positions to drive down the price of JPM stock to $1 per share. Cohorts of JPM like Goldman Sachs recommend everyone to sell WMI short.

JPM simultaneously compels the public rating agencies to downgrade WMI bonds and stocks. The rating agencies have a model to downgrade securities based on dropping stock price. The rating agencies thus follow their model[1]. JPM merely advises the rating agencies to perform their fiduciary duty of downgrading securities of a company with falling stock prices.

The rating downgrades make sure that WMI cannot raise capital on a competitive basis and Federal Reserve has not guaranteed existence of WMI, which is not a member of the clearing house. Then rumors circulate in the grapevine about the FDIC contemplating seizure of WMI. This leads to some WMB depositors withdrawing their funds. The FDIC, Federal Reserve and Treasury are now scared. So is Congress. They are so scared that now they have to ask JPM to takeover WMB's assets and deposits by zeroing all other security holders (WMI equity and debt and WMB bondholders).

Private property is thus seized unconstitutionally and given away to JPM for pittance.

JPM CEO, after 1.5 years of the seizure, brags before his shareholders about the immense value of WMI assets it brought for them: about $18 billion in annualized profits which amount to a present value of assets of $360 billion, by using even a very high cost of capital of debt (5%) employed in the acquisition, and by assuming no growth.

Washington Mutual Bank was not in default at the time of seizure. The WMB bonds were fully protected with the scheduled coupon payments duly paid on time. WMB bonds would be protected fully even if WMB were not seized and stayed with its previous parent company. Washington Mutual Incorporated (the parent holding company of WMB) was not in default at the time of seizure. Even now, in the bankruptcy court, WMI is highly solvent with all WMI bonds trading in the market above par.

That the WMI BOD has acted at the behest of JPM is obvious. On bankruptcy, the WMI BOD has appointed a Debtor's attorney to propose a plan of reorganization by giving away significant assets of the bankrupt WMI estate to JPM to void any legitimate claim of equity in the estate.

So, JPM has accomplished its Project West plan, unconstitutionally, to grow bigger to dictate sharper terms to the Congress and Regulators, more vociferously than ever before.

WMB was solvent with much more than the minimum required capital, as per the testimony of its primary regulator, the OTS, signed by the FDIC. The FDIC now faces a legal suit from Washington Mutual Bondholders for about $20 billion. These bondholders are taxpayers too.

Thousands of families, whose security holdings have been zeroed out due to the seizure, have lost their wherewithal to live or retire. Some of them have committed suicide. Some have faced painful divorce. They too are the taxpayers. Should their possessions have been unconstitutionally seized?

Such unconstitutional seizure and pervasive tragedy leading to depression is possible due to short selling within the current system of money and finance. Short selling creates shares to increase its supply (beyond the legally approved outstanding under the company law) to depress the price and rob the true owners of a company. Short selling is unconstitutional and illegal, yet it is permitted by the Security and Exchange Commission.

Whose interest is served by the SEC-permitted unconstitutional practice of short selling? Obviously, not that of the taxpayers, of households whose perseverance props national prosperity and security, of the Congress who have enacted laws to preserve the constitutional rights to private property, or of the regulators who face irreparable damage to their own reputation.

The academic paradigm that rationalizes short selling as needed for hedging is itself unconstitutional[2]. No research can ever prove that illegal and unconstitutional seizure of hard earned private property is justified by hedging or any such specious logic.

[1] Acharya, S. (2000) has proposed a new rating methodology published in the Financial Analyst Journal in 2000 and available at http://pro-prosperity.com/Research/ratingmethodology.pdf. This paper presents serious flaws in the rating models used by rating agencies. The three ratings agencies have responded to this paper.

[2] See Acharya, S. (2012a), "Arbitrage Pricing of Total Risk of Assets and First-best Governance of Financial Markets," at http://pro-prosperity.com/Research/moralhazardliberty.pdf.

Wisdom has dawned on Senate Agriculture Committee to prevent commercial banks from speculative trading in derivatives and to make all derivative trades go through public exchanges. This reflects the March 23, 2010 memo on constitutional rules to avert destruction of capital (see Acharya, 2010a). It is not a question of traders gambling on their own. It is a profound issue of whether banks should have the privilege of using taxpayer insured deposits on speculative trading that destroys the hard earned capital (a measure of dignity of labor) of society.

Even if private hedge funds do not use insured deposits, all their trades have to be cleared by public exchanges (not controlled by any trader including mega banks that trade) because the prices emerging from their trades are employed to mark to market the values of assets of levered companies. Hedge funds (including mega bank hedge funds) can easily doom a commercial bank to take it over for pittance by recording lower prices for the bank's assets to lower the value of its capital (based on the marked to market accounting rule) by using a few private trades of securities created synthetically in privately controlled exchanges.

The exchanges and clearing houses have to be public, which means they cannot be controlled by any trader including mega bank traders. The Senate Agriculture Committee's proposed bill has to make explicit that the exchanges and clearing houses are not only public but also beyond the legal control of the bankers that trade. This is necessary to avoid future catastrophes.

**Corollary 1 to Theorem 1:** Under the current system of money and finance defined by Rules 1 through 4 and Axioms 1, 2 and 3, short selling Rule 5 can transgress the constitutional right of individuals' right to their property.

**Proof.** The transfer of wealth from less informed and less resourceful investors to more informed and more resourceful CH members through short selling under the prevailing system of money and finance (shown in Theorem 1) makes this system along with the short selling rule unconstitutional as it leads to usurpation of property of individuals.

**Corollary 2 to Theorem 1:** Under the current system of money and finance defined by Rules 1 through 4 and Axioms 1, 2 and 3, short-selling Rule 5 can result in artificial short-term inflation in commodity prices and artificial short-term interest rate increases if there exist sufficient number of non-traders who buy and hold commodity contracts, e.g., on food grains, meat and oil.

**Proof.** The profit seeking CH members will take the cheap insured deposits and CB funds to bet long in concert with the non-traders of commodity contracts to raise the commodity prices beyond the level dictated by equilibrium between the true supply and demand by consumers of commodities. As the price rises above equilibrium level, consumers respond by cutting their consumption and then the price falls sufficiently below the equilibrium level, when the CH member shorts cover by buying the commodity contracts from short-term holders. The issue is not how much the CH members make under the system. It is that they always are able to privatize profits by short selling at artificially higher prices and covering at artificially lower prices and to socialize losses under the current system of money and finance without ever going broke as the CB replenishes any loss in their capital through the spread between rate at which they can lend the government and borrow from insured deposits and CB funds. The irony is that the CB is dragged into the game set up by the CH members under the current system of money and finance, by raising [lowering] the interest unwarrantedly in response to artificial rises [fall] in commodity prices. The CH members are able to save their profits at higher rates and borrow at lower rates with guaranteed security to perpetuate their privileged existence by subjecting the rest to underprivileged subsistence.

**Corollary 3 to Theorem 1:** Under the current system of money and finance defined by Rules 1 through 4 and Axioms 1, 2 and 3, short selling Rule 5 can result in severe financial depressions for households and non-financial firms.

**Proof.** Due to the current system of money and finance, the CH members always stay solvent and perennially succeed to privatize profits without taking risks, i.e., by usurping wealth (capital) created by households and non-financial firms and by piling the residual risk of the economy on public. In fact, even those who do not pay income tax and other known forms of taxes, bear the brunt (indirect taxes) of rising prices of necessary commodities. The continual transfer of wealth to the CH members from the households and non-financial firms sets periodic market panics when asset holders sell off their holdings at great losses, just to deposit the salvaged proceeds at abysmally lower rates of interest as the CB responds to the panics by lowering the interest rate. Losses to non-financial firms due to the panic often lead to their closure and job losses. Those who are thus forced to be unemployed have very little income from the residual savings salvaged from the sales of their assets at huge losses. This can lead to an uncontrollable severe depression[1].

[1] See Acharya, S. (October 28, 2010). "Systemic Weakness in the US Economy: Inefficiency and Unconstitutionality of the Federal Reserve Act and the Federal Deposit Insurance Corporation Act", at http://pro-prosperity.com/Systemic%20Weakness%20in%20the%20United%20States%20Economy.html; and Acharya, S. (September 2010). "Constitutional System of Money and Finance", at http://pro-prosperity.com/Research/Constitutional-Monetary-Finance-System.pdf.

**Theorem 2:** Enough of non-traders (Axiom 4) can make short selling (Rule 5) ineffective in generating profits for the CH members and eventually lead to a reform of the current system of money and finance.

**Proof.** The proof of Theorem 2 also can be constructed through an example. (1) First assume that every household and non-CH member stops trading after buying real assets like gold, silver and real-estate based on savings and is never swayed by news or rumors. The short-sellers are obligated to buy the assets they sell short from those who hold these assets long. But with no reseller of these assets, the shorts will have no option but to buy at higher prices any new real asset generated in the market to cover their obligations. They will thus always lose as a result of short selling even within the current system of money and finance. In this case, even the CH members selling such real assets short will be squeezed with steep losses-despite their privileged access to cheap insured deposits and CB funds – as the prices of these assets rise due to non-traders buying and holding them forever. (2) If everyone is a trader (when Axiom 4 does not hold), Theorem 1 will ensure that the CH members can reap enormous profits from selling securities short.

The arguments (1) and (2) imply that when a sufficiently large proportion of non-traders emerge in an economy, the current system of money and finance will no longer generate net profits from short selling by even the CH members despite their privileged access to cheap insured deposits and CB funds. In this case, the CH members and the CB can come under enormous public pressure for having lent all the cheap insured deposits and CB funds for their private trading activities. This will automatically lead to pressure on the government to dismantle the current system of money and finance[1].

Extant research on short-selling is primarily empirical[2]. Such empirical studies cannot be used to draw rational or consistent inference because they use data generated by an inefficient and unconstitutional system of money and finance (Acharya, 2010c). The prevailing system of money and finance is governed by short selling, the Federal Reserve Act of 1913, federal deposit insurance and holding company structure, which has been proved as inefficient and unconstitutional in Acharya (2012a). Data generated by an inefficient and unconstitutional system cannot thus rationally vouchsafe for efficiency and constitutionality of the current short selling policy.

## 3. The real problem facing the USA: short selling

It may seem as if the real problem facing the vast majority of Americans is a lack of universal healthcare or unneeded tax-breaks to the rich. But deeper analysis can reveal that the real malaise facing the vast majority is *short selling* of either wages or retirement savings stored in financial securities.

Short selling can take many forms: short selling of (a) wages of workers; (b) fiat money; and (c) financial securities.

Short selling of wages amounts to outsourcing or cannibalizing, i.e., removing highly paid productive workers to rehire them as consultants on lower pay.

Creating new money is equivalent to selling short or robbing the holdings (savings and labor) of the vast majority. Creation of new money leads to increased debt and financial bondage, which is a euphemism for actual slaving under the veneer of economic growth[3]. Religious and philosophical gurus have prescribed zero interest rates to alleviate financial bondage[4].

Money and credit are nothing but labor, which is mental and physical. Even commodities have to be mined or cultivated by labor. When money is created for war or development, it is usurped disproportionately by a few. This amounts to financial deprivation or enslaving of the vast majority. The new money created so does not necessarily produce globally competitive goods, services or ideas. It results in higher inflation in prices of necessities. Such inflation erodes the stagnant incomes of the vast majority. This amounts to short selling of the holdings (monetary and labor) of the financially deprived majority, who are forced to borrow, for sustenance, from the usurped credits accumulated by the few. The majority is then forced to repay, by laboring harder perpetually, the debt with interest rates fixed by the few usurpers. Short selling thus leads to a perpetual bondage of the vast majority.

Continuance of short selling is unlikely to revive the economy. For example, rising healthcare costs is a serious detriment to economic growth in the USA.

[1] See Acharya, S. (2008a). "Sub-optimality of Lending Taxpayer money to Hedge Funds", at http://pro-prosperity.com/Research/Sub-optimality%20of%20Lending%20Taxpayer%20Funds%20to%20Hedge%20Funds.pdf.

[2] See, e.g., Beber, Alessandro and Marco Pagano (2009), Boehmer, Ekkehart, Charles M. Jones and Xiaoyan Zhang (2009), Bris, Arturo, William N. Goetzmann, and Ning Zhu (2007), and Harris, Lawrence E, Ethan Namvar, and Blake Phillips (2009).

[3] That the economic growth is a false measure of prosperity is vividly illustrated in an example in Acharya (2008b), "Optimal CEO Compensation in Best National Interest", http://www.pro-prosperity.com/American%20Prosperity%20through%20Limiting%20CEO%20Compensation.html.

[4] Saint Vashistha has advocated for a zero interest rate society sometime in 1500 BC. Prophet Mohammad wanted to stop financial enslaving through a riba-free (zero interest rate) financial system. Aristotle and Pluto as well as the Church have come to the same conclusion.

Universal healthcare with national pricing of insurance premiums is needed to lower the healthcare costs. But doing so will lead to massive short selling of healthcare workers and company stocks. So, universal healthcare can beget a greater net loss to American households if short selling is continued.

Furthermore, more taxes are perhaps needed for fiscal stability in the USA. But if short selling is continued, higher taxes can make Americans poorer on average. If more tax is levied on higher earners, then the whole market will be sold short. This will decimate the values of pension plans of the vast majority. It can make the middleclass poorer than it is now.

The rich have accumulated immense credits. These credits permit them to short sell even the dollar by buying commodities to inflict inflation in prices of food and energy on the vast majority.

Those who run the prevailing system of money-credit-banking-finance-economics have no incentive to inform the perils of short selling to the vast majority because that is how they can perpetuate indolent usurpation of the fruits of labor of the effective workers who produce globally competitive goods, services and ideas.

When will such short selling be optimal? In a society where a few are allowed to control the vast majority by dictatorship, short selling may be an optimal rule of governance.

Short selling is, however, sub-optimal for democracies where majorities rule. The majority may not have comprehended that the system of short selling leads to financial enslaving by the few. But the majority will eventually recognize the real problem and then burst into anger and violence, like in the Great Depression and social riots. Such outburst may appear incoherent and unreasonable to the few rich if the problem has not been articulated for common understanding for an amicable solution. It is, thus, very important to articulate the sub-optimality of short selling for a democratic society[1].

How short selling has become a potent weapon for mutual destruction of capital as well as for deterioration in international relations is presented in a memo dated March 23, 2010 sent to the US President and Congress (see Acharya, 2010d).

**3.1. Short selling destroys home mortgage market.** Short selling could destroy the home mortgage debt market during the Great Recession.

For example, a large bank like Goldman Sachs could buy the best rated mortgage debts from several mortgage banks to securitize as mortgage backed securities (MBS). Goldman Sachs could then sell the MBS to other investors like Bear Stern and Merrill Lynch.

JPM can then short sell massive quantities of the same category of MBS without being required to borrow the securities under the SEC rule. The market could then have an artificially increased quantity of outstanding MBS. This could drive down the MBS values at Bear Stern and Merrill Lynch, making these investment banks fall. Such failures could scare the regulators and Congress to offer inducements in terms of billions of dollars of fresh taxpayer funds to rescue the failed investment banks.

The mega short sellers could thus acquire the best rated mortgage loans cheaply by depriving the owners of Bear Sterns and Merrill Lynch. Consolidation could then allow the short sellers to resort to predatory lending.

Here is a numerical example. Suppose that JPM acquires $100 mortgage loans, made to zero risk borrowers, at par. JPM then creates mortgage backed securities (MBS) based on these loans, gets the MBS rated as AAA and then short sells the same at par to Bear Sterns. This should be enticing to Bear Sterns because it buys the MBS at no premium. Now JPM short sells another $100 of the same AAA-rated MBS to Merrill Lynch. JPM thus makes $200 from the MBS sold to the two investment banks. Neither Bear Sterns nor Merrill Lynch holds the original mortgage loans underlying the MBS. Only JPM holds the original mortgage loans and receives annual payments (at say 6% per year) from the borrowers of those loans. JPM has paid $100 to the mortgage borrowers, but makes $200 upfront from two investment banks or a net of $100 upfront. JPM pays annually $12 to the investment banks and receives from the mortgage borrowers $6. This amounts to a net annual payment of $6 by JPM.

The short sale thus generates for JPM a net cash inflow of $100 upfront and a net annual cash outflow of $6. This appears fair and unproblematic.

But then JPM short sells the same AAA-rated MBS for $90 with a promise to make the same annual payment of $6 to other investors. This looks unprofitable to JPM and attractive to buyers. But it can be strategic for JPM and devastating to others including the economy. The short sale at reduced price depresses the equity capital of both Bear Sterns and Merrill Lynch by 10% of all their MBS holdings.

If Bear Sterns borrows from JPM to buy the MBS, it is doomed by JPM. This is possible due to legality of short selling under the SEC rule.

[1] While short selling of financial securities is sub-optimal, equivalent policy on short selling of wages is optimal CEO compensation as argued in Acharya (2008b) and on undermining of bank savings is safe banking policy as shown in Acharya (2012a).

Speculative short selling thus allows JPM to take over Bear Sterns to control the mortgage market and unleash predatory lending. Such developments during the Great Depression led the Congress to create Fannie Mae and Freddie Mac to contain predatory lending.

Speculative short selling facilitates predatory lending. The short selling rule of the SEC makes JPM's actions in the above example legal. But this rule is unconstitutional because it facilitates usurpation of (a) property that belongs to owners of Bear Sterns and (b) incomes of home mortgage holders through usurious interest rates that a consolidated bank can set predatorily.

The name of JPM in the above example is incidental. JPM can be replaced by any other bank in this example to arrive at the same conclusion that the SEC rule is unconstitutional and should be banned.

**3.2. Short selling can destroy the housing sector.** Rampant speculative short selling devastated the economy during the Great Depression. The SEC learnt nothing from it or is simply pretending ignorance. Speculative short selling made the financial firms the most vulnerable during the Great Recession, as it did during the Great Depression. The SEC went haywire during 2009 about short selling that it first banned selectively and then lifted.

The academic studies based on data during the SEC ban and after the ban argue that speculative short selling does not increase price volatility. But the SEC ban was not extended to all firms and it excluded financial firms like Washington Mutual. The academic study obviously did not consider stock prices of specific companies like WaMu, Bear Sterns, Merrill Lynch and Lehman Brothers that had perished by the time SEC introduced its ban on short selling. No study is necessary to establish that the stock prices of these firms were wildly swinging during 2008. It was due to speculative short selling. The short sellers can be formally established only by examining the confidential trading books of the market makers and clearing houses.

Speculators bought huge quantities of Credit Default Swaps (CDS) − which are put options on MBS − and simultaneously short sold MBS as well as other debt and equity securities issued by mortgage banks. This led to a rapid decline in prices of mortgage bank securities. It then prompted the rating agencies to lower their ratings. Rating downgrades curtailed the availability of funds to many mortgage banks. This destroyed the ability of mortgage banks to finance homes. Many mortgage banks folded and home prices scaled down.

The top rated home mortgage borrowers continue to pay their mortgage payments at higher rates of interests artificially set by the shenanigans of the banks and hedge funds. These home owners cannot avail of the lower rates of interest on the new money created on their back by the Federal Reserve. The new cheap funds injected to banks have perhaps gone to private hedge funds. Many home owners with decimated prices of their homes are resorting to strategic defaults.

It is so eerie that the replacement cost of many homes, as quoted by home insurers, is significantly higher (sometimes 200% more) than the assessed values based on declining prices caused by strategic defaults.

Speculative short selling of MBS has thus exacerbated the home mortgage crisis.

**3.3. Short selling can destroy international relations.** Speculative short selling led to bitter relations with China and Russia in 2008.

A top strategist, advising the Chinese government, warned on September 5, 2008 about an end to the international financial system, if not end of the world, if the US government did not honor the tacitly guaranteed Fannie and Freddie debt. China warned after worrying about the spurt in speculative short positions on Fannie and Freddie securities including common stock. Speculative short selling thus pushed the U.S. to the brink of a financial war with China and Russia. It then forced the Treasury Secretary to the White House bunker to push Fannie and Freddie into conservatorship. The Federal Reserve had to swap the Chinese and Russian debt holdings for guaranteed deposits in the Federal Reserve Bank of New York for about $600 billion.

The speculative short sellers were the same banks who first short sold the taxpayers by originating subprime mortgage loans including liar loans and transferring the loans to Fannie and Freddie. They then short sold Fannie and Freddie securities and lobbied for dismantling the GSEs, which were created to alleviate the woes of the Great Depression and were critical during the Great Recession.

The speculative short selling was almost poised to create anarchy domestically through Great Depression II and internationally by straining relations with China and Russia.

Every banking and nonbanking firm must have acted in itself interest while selling securities short. The speculative short selling rule granted by the SEC appeared to help a bank boost its profits temporarily. But mutual short selling of each other's holdings forced most banks to their collective ruin and pushed the fate of a great nation to the brink of

disaster. Speculative short selling thus strikes the heart of the nation as well as society, in addition to causing unconstitutional plunder of hard earned savings of households. After discovering its deadly force in 2001, I have articulated it in memos and papers since 2003 to plead with the Congress for a universal ban on speculative short selling.

**3.4. Non-speculative short selling should remain legal.** Short selling is not always speculative. Non-speculative short selling does not artificially raise the supply of securities. It is needed for hedging.

For example, farmers short sell forward contracts at the time of plantation to deliver their crop at the time of harvest for a forward price set at the time of plantation. Farmers will plant only if the forward price exceeds the cost of plantation and harvest. If the forward price is less than the cost of production, the farmer will avoid plantation and avert the potential agony of becoming bankrupt.

We have similar examples for exporters who need to short sell forward foreign exchange contracts to hedge their future foreign currency earnings.

Oil exporting countries often short sell forward contracts to deliver crude oil to the importing countries.

Portfolio managers often buy put options to hedge their portfolios. Option specialists write (short sell) options and hedge their risk exposure by trading in the common stock on which the options are written. This is necessary to run their brokerage business that earns them commission. Short selling of securities for such hedging is non-speculative and should not be banned.

Non-speculative short selling is needed to protect/hedge basic business operations. Non-speculative short selling does not artificially increase the supply of securities because the short positions are usually covered.

## Conclusion

This paper has argued that short selling of financial securities is not only illegal under the Company Act, but also economically inefficient, unconstitutional and sub-optimal. Short selling can continually depress households economically. Economic depression could lead to a recurrence of the Great Depression. Short selling under the current system of money and finance can cause economic inefficiency and unconstitutional usurpation of individual and public properties. In the best interest of society, short selling should thus be banned and the current system of money and finance should be reformed.

Wouldn't a law to ban short selling subvert the freedom of short-sellers to systemically usurp the hard-earned wealth of others? This can be answered by a philosophy which has not only guided humanity over millennia for civilized coexistence, but also triumphed and prevailed (see Acharya, 2011b). This philosophy has resulted in the modern constitution, which grants no right to any individual (let alone to an organized system of short selling and privileged private market clearing) to usurp others' hard-earned wealth, even surreptitiously. The idea behind this philosophy is that humans labor, mentally and physically, to accumulate assets like home and savings which are the sources of their freedom that no one else can snatch away by any design.

The paper is not about financial accident prevention through a ban on short selling. It is about prevention of robbing of hard-earned wealth through short selling and privileged private market clearing.

Systemic loss is the point of the paper. Systemic loss is caused by short selling, which means that the game (of short selling and privileged private market clearing) is negative-sum, not zero-sum. Systemic loss means economic inefficiency or net destruction of accumulated capital (hard-earned wealth of people).

I could estimate or test for the systemic loss if I had the proprietary trading data of the privileged market clearing house members, ex ante in 2001, which I indeed requested the SEC to supply without disclosure of the identities of the short-sellers/traders/bankers. The SEC had responded seriously to my memos, but could not fetch me the needed data. In any case, the financial catastrophe of 2008 has publicly exposed that the game of short selling and privileged private market clearing has been negative-sum or economically inefficient. So, whatever I wanted to prove/estimate, ex ante, became obvious to all, ex post.

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