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WERE THE CURRENT BEAR MARKET AND THE RECESSION PREDICTABLE?[1]

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The purpose of this paper is to determine the elements that caused the current and prospective problems to the U.S. and consequently, to all economies of the world, due to globalization. A theoretical model is used to measure first, the benefits (gains) and costs (losses) to society by considering some objective macroeconomic variables and their deviations from the target ones. Then, we determine the factors affecting the objective variables of the economy through their correlation and causality by taking into consideration policy variables (i.e., money supply and interest rate), aggregate demand, and exogenous ones. The global uncertainty has increased the price of gold and the U.S. debts and deficits have caused the depreciation of the dollar, which with the help of speculators have heightened the price of oil and a reduction in income, which have affected negatively the financial markets. The deregulation in financial markets and institutions and the easy money policy has increased lending, liquidity, "innovations", corruption, speculation, prices in financial and real assets (even in food and real estate) and had caused an enormous bubble, which some people ("the world's planners") burst it, last year and created the worst housing and financial crisis, following by the current most severe recession in modern economic history, which were more or less predictable.

JEL (Classification): C13, C22, C53, F41, F42, G14

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I. INTRODUCTION: A RECENT DESCRIPTIVE REVIEW OF OUR SOCIETY

The global uncertainty, and the volatility of the financial markets, which have been cultivated since 1980s (Reagan, Bush I, Clinton, and Bush II), due to the forcefully and undemocratically imposed globalization[2] are growing and the news from all sources (even though that they are controlled, "politically correct") were revealing this planned crisis. Behind these politicians and their imposed policies are humans and history that cannot be ignored. Of course, a question remains in every individual; where all this money from the financial markets has gone? Who is in control of our leaders? Why the system has failed? The battle for the past is determining the battle for the present and the current battle will affect the future battle. Confidence in leaders, markets, and institutions has been lost and people are disappointed with all these stranger ideas, innovations, instability, and planned global disorder. We cannot take away the traditional values, virtues, faith, hope, and dignity from people and give to them some "market values" and "indemnities" from good insurance coverage.

The major recent problems and conflicts in our world are the followings.[3] The prolong war in Iraq, (even the former Secretary of State, Madeleine Albright, called Iraq the "Greatest Disaster" in the U.S. foreign policy), the chaos in Pakistan after Bhutto's assassination, the Afghanistan turmoil and the shift of the war, there, from Iraq, the Turkish invasion in North Iraq (Kurdistan), the Middle East disorder, especially lately, with the Israeli bombing campaign and invasion in the Gaza Strip, which lasted for three weeks, the Kosovo confusion and injustice with its declaration of independence and the creation of a Muslim (Turkish remnants) Great Albania in Balkans, the usurp of the Greek name "Macedonia" and Greek history and symbols by Skopje, the aggression of Turkey against Greece and Cyprus (Turkish war planes are continuously flying over Greek islands violating the aerial space of the country), the American interference in Europe, the antiterrorism policies which have infringed civil liberties, the creeping war with Iran and other "evil" nations, the African anarchy and civil wars, the rising of piracy from Somalia that threatens international trade, the diseases in the third world and the swine flu, the growing Chinese superiority and aggressiveness and the Indian outsourcing (China will be the future threat for the west), the corruption in business and politics,[4] the fraud in financial markets (especially, derivatives, hedge funds="the big lie", and other "toxic" innovations), the bribes from companies to government officials to win contracts, the outrageous, anti-social, and unjustifiable executives' pay in our free-market system and in some educational institutions. At the same time the low wages and without any other benefits employment for many workers, the tax-evasion by many wealthy people, the losses of the private pension plans and the dry out social security systems, the immorality, the reanimation of the cold war, terrorism, poverty, famine, overconsumption, waste, illegal migration, crime, and the international political, economic, and social fears (neo-barbarism) have negative effects on the faithless (neo-liberal) U.S., European nations, and the rest of the world. The illusions and delusions in education have deteriorated our educational system and prohibit the true knowledge. The U.S. offered a tremendous Foreign Aid of $26 billion to 150 countries in 2008, too. The crude oil prices hit $144.15 per barrel on July 3, 2008. The stock markets fell around the world,[5] the dollar declined,[6] and the gold hit a record $1,041.10 per ounce (10/6/2009). The U.S. economy started slowing sharply since the fourth quarter of 2007 ($g_{GDP} = -0.2\%$) and the inflation in the last two months of 2007 was exceeded 4.1% and fell to 3.85% in 2008. Now, first and second quarter of 2009, the growth was negative (-6.43% and -1.02%) and the unemployment rate in September 2009 reached 9.8%. Prices were going up drastically even though officials in every country manipulate the price indexes, trying to reduce inflation risk premium; hence, keeping interest rates low, downgrade pessimism of their citizens, and "improve" the financial markets.

Also, tremendous debts[7] and deficits, a credit-crunch (due to major problems in the mortgage market and financial institutions),[8] and closed to zero savings shake the financial institutions and the globally "integrated" financial system. Policy

makers have to find ways to stabilize this inhumane "glob-onomics" or better planned "shock-onomics". Over all, the lack of regulations, the same kind of people working for the Financial Market (Wall Street) and then, they appointed for the Federal Reserve, the government or the regulatory agencies; but these people care only for their self-interest and their group's interest and not for the country's interest and the citizens' interest; they have created this current financial crisis with their "innovations", speculations, and corruptions. Now, the U.S. economy is sinking (lack of balance and equilibrium) because it depends only on financial services and on nothing else; the primary (agriculture) and secondary (manufacturing) sectors have been abandoned, and its international (foreign and trade) policy is becoming from bad, worse. Then, we are wondering why so many people, today, have serious psychological, mental, and spiritual problems; of course, the financial crisis has deteriorated the situation and many people are committed even suicide.

It is known to everyone that regulators and politicians are agents for voter-taxpayers (principals). Taxpayers bear the cost of any losses by the deposit insurance agency and by bailing out these failing financial institutions. This tremendous principal-agent problem occurred because the agent (politicians and regulators) does not have the same incentive to minimize social costs to the economy, as the principal (taxpayers). The agents must set tight restrictions on holding assets that are too risky, must regulate the issue of new instruments (financial innovations), must impose high capital requirements, and must not adopt a stance of regulatory forbearance, which allows insolvent institutions to continue to operate. Unfortunately, agents have incentives to do the opposite. They hide the problem of an insolvent bank and hope that the situation will improve, but here, it is not one bank, these are all the investment banks; it is the entire financial system that is operating without any control or regulation. This has become a free-market gambling and not a secured business. Politicians try to keep regulators from imposing regulations on institutions that were major campaign contributors. Members of Congress have often lobbied regulators to ease up on a particular financial institution that contributed large sums to their campaigns.[9] Congress and the presidential administrations promoted for 30 years legislations that made it easier for financial institutions to engage in risk-taking activities. Regulatory agencies needed more resources to carry out their monitoring activities properly, but Congress was lobbied to avoid this allocation of necessary funds to regulators. Regulatory agencies became short-staffed and cut back on their on-site examinations. Thus, it was expected that the structure of the free-market system and our political system should contribute to this serious principal-agent problem, which led to financial crisis and to the current recession.

Of course, the unprecedented current financial crisis is not only the result of bad lending (sub-prime mortgages), but the uncontrolled complexity and innovative instruments [securitization, structured investment vehicles (SIVs), collateralized debt obligations (CDOs), credit enhancement, derivatives, credit-default swaps

(CDSs), hedge funds, toxic assets, gambling, etc.],[10] which have increased instability to these greedy markets. One party transfers the risk to the other if certain events happen and the expectations of this party will be proved correct; thus, its profits will soar (zero-sum games and not instruments to manage risk). The self-interest and the complicated bets for maximizing personal returns, without knowing the financial position of the others, led these markets to servitude by the "dark powers". This uncontrolled (deregulated) free-market philosophy and practice will cause unwelcome pain for many years to come even after the recovery.

This trend was continued and twelve years later, on November 15, 1999, Congress repealed the Glass-Steagall Act of 1933 and the Financial Services Modernization (Gramm-Leach-Bliley) Act was passed.[11] This new Act changed the entire financial culture. Until that time, commercial banks were not high-risk ventures, but they were managed hard-working people's deposits very conservatively and the government would pay off in case of banks' default (FDIC insurance). Investment banks were managed rich people's excess wealth, who can take bigger risks (risk-seekers) in order to get bigger returns (or losses, which their costs are insignificants for these affluent people). Since 1999, when investment and commercial banks are the same institutions, it started a demand for the kind of high returns that could be obtained only through high leverage, cheating, innovating, manipulating, and risk-taking. Also, in April 2004, the Securities and Exchange Commission at a meeting allowed big investment banks to increase their debt-to-capital ration (from 12/1 to 30/1 or higher) so that they could buy more mortgage-backed securities and inflating the housing bubble even more in the process. The most important challenge was that posed by derivatives in the 21st-century deregulated markets.

Also, in 2000 and 2001, with the collapse of WorldCom, Enron, and major scandals of other firms,[12] Congress passed the Sarbanes-Oxley Act of 2002. These scandals had involved major U.S. accounting firms and other institutions and companies, which proved that our accounting system had problems. The conclusion was that the fundamental underlying problem was stock options. If a company does well, the CEO gets great rewards in the form of stock options, which became an incentive for him to use "bad" accounting, pumping up the earning and affects positively the stock prices.[13] The incentive structure exists also for the rating agencies. These agencies (Moody's, Standard & Poor's, Fritch Ratings, etc.) are paid by the very people they are supposed to grade, so they give (sell) high ratings.[14] Unfortunately, the regulators are also corrupted. Thus, there is no one that can control or regulate the others. The problem is, without any doubts, a serious moral, ethical, and leadership one; not a financial or economic one, as many want to mislead the general public.

Unexpectedly, increases in house prices, low interest rates, and low unemployment contributed to the increased use and extension of subprime credit. The first hints of trouble in the mortgage market appeared in mid-2005 and

conditions began to deteriorate, with house prices started to decline, interest rates began increasing, and later unemployment appeared; these factors contributed to the mortgage crisis. The share of mortgage loans that were "seriously delinquent" (90 days or more past due or in the process of foreclosure) started to increase (from 2.4% in 2002 surged to 5.2% in 2008). Mortgage defaults and delinquencies are particularly concentrated among borrowers whose mortgages are classified as "subprime" or "near-prime".[15] This dramatic rise in delinquency rates had spurred widespread concerns about the effects on borrowers, lenders, investors, local communities, the overall economy, and very soon the global economy because these risky loans were pooled into securities and sold to investors (securitization). The combined loan-to-value ratio rose to 100% and the FICO credit score in subprime pools fell to around 612 and in Alt-A pools to 703. Then, slackened underwriting standards, without down payments, combined with falling house prices appear to be the most immediate contributors to the rise in mortgage defaults.

The SEC subpoenaed over two dozen hedge funds, widening its probe into whether traders were spreading rumors to manipulate shares.[16] Bear Sterns, one of the most aggressive investment banks, agreed to be sold to J. P. Morgan Chase & Co. in March of 2008, after the firm's clients fled and it was running out of cash.[17] With all this stress on the system, the 3-month LIBOR (a measure of banks' borrowing costs) was spiking as credit crunch worsens reached 3.76188% from 2.54188% six months ago.[18] The euro interbank offered rate or Euribor, that banks charge each other for one-month loans climbed to a record 5.05%. The central banks were lending money to banks or were injecting billion of dollars to their country's system. The money markets had completely broken down, central banks were the only providers of cash to the market, no-one else was lending. The TED spread (the difference between what banks and the U.S. Treasury pay to borrow money for three months) was at 352 basis points. This spread was at 110 basis points a month ago and on October 14, 2008 reached 486 basis points.[19]

In addition, the U.S. government was set to buy preferred equity stakes in several top financial institutions (Goldman Sachs Group Inc.,[20] Morgan Stanley, J.P. Morgan Chase & Co., Bank of America Corp., Citigroup Inc., Wells Fargo & Co., Bank of New York Mellon, and others) as part of a broad effort to bolster the banking system.[21] The Bush administration was injecting $250 billion into financial institutions and guaranteeing their debt and deposits. Credit had become so tight that firms contemplating bankruptcy protection could not find the cash that was needed to get through the process. An international summit in Washington (October 18, 2008) on the financial crisis turned into a debate over the future shape of capitalism, with European leaders favoring greater international oversight of markets, and U.S. officials preferring the current model of national regulation.[22]

The literature on this area is huge; the financial press (The Wall Street Journal, The Financial Times, etc.), and all the news extensively deal with the issues in

question, here. Brock, Durlauf, and West (2003) describe some approaches to macroeconomic policy evaluation in the presence of uncertainty about the structure of the economic environment. Angeloni, Kashyap, Mojon, and Terlizzese (2003) found that in the Euro-area investment is the predominant driver of output changes, while in the U.S. consumption shifts are significantly more important. Greenspan (2004) said that monetary policy since 1979 has meaningfully contributed to the impressive performance of the economy. Chambers (2007) says that investment banks with this continuing globalization face challenges and uncertainty that will dictate their success or failure. Ross and Wolf (2007) proposed to companies to think beyond traditional business continuity planning and with a Risk Intelligent Enterprise to analyze their impact on people, processes, technology, and facilities. Veracierto (2008) illustrates how corruption can lower the rate of product innovation in industries, which result in a lower growth rate for the whole economy. Kallianiotis (2008a, b, and c) analyzes the effect of the global uncertainty on the value of the U.S. dollar, on the price of oil, and on the growth of the economies. Kallianiotis (2009a) refers to three problems of the free-market, uncertainty, unemployment, and untrustworthiness. Gavin (2009) discusses the massive purchases of private debt and the issue of hundreds of billions of dollars in short-term loans by the Fed and the effect of this policy on monetary base and on future inflation. Demyanyk (2009) analyzes the effect of the subprime lending on the increase of homeownership in the United States. Mayer, Pence, and Sherlund (2009) talk about the subprime and Alt-A mortgages and try to determine the reasons for their delinquency. Coval, Jurek, and Stafford (2009) discuss the transformation of trillions of dollars of risky mortgage securitization assets to be sold as safe instruments. Cecchetti (2009) covers the response of the Fed in the financial crisis. Brunnermeier (2009) presents the credit crunch and the mortgage crisis, which became a global financial crisis. Shin (2009) discusses the bank run of the U.K. Northern Rock Bank. Our hypothesis is, here, that tremendous debts, deregulations, innovations, and corruptions have increased risk, reduced trust, and caused the financial crisis, the recession, and its negative effects on employment. As the social losses of an economy are increasing, the financial market is disturbed, and the real sector is negatively affected; then, the recession follows. Consequently, the future state of the economy could be predicted from the loss to society function.

The paper proceeds as follows. Section II describes the theoretical model and gives the social loss function. Section III produces the main empirical results. Section IV provides some public policy implications of the current problems of deregulation and globalization. Finally, section V presents the conclusion.

II. A LOSS TO SOCIETY FUNCTION: THEORETICAL MODEL

The objective of every well-governed, developed, sociable, democratic, and independent state is the optimization of its social welfare function (citizens' utilities).

Optimize $$W = f(u^A, u^B, u^C, ..., u^N) \quad (1)$$
where, W = social welfare, $u^A, u^B, u^C, ..., u^N$ = utility (happiness) of individuals A, B, C, …, and N in the nation.

The goal of public policy is to pursue approaches, rules, and regulations, which should be evaluated from the point of view of the society's well-being and not from the profit maximization of multinational institutions, firms, and risk-taking billionaires. The total welfare of a country (based on the growth of population, the factor endowments, and the state of the economy) must be improved continuously. General concerns about the state of the economy or anxiety about crime rate or high risk or job losses are affecting negatively the social welfare. Also, the measurement of social welfare requires some ethical and country-specific standards, which involve internal and eternal value judgments. As a welfare criterion can be the growth of the wealth of the society (nation's GNP), which increases employment ($u \cong 0$) and production (keeping prices stable). This implies that the income distribution will be ethical and just (not exactly equal). A high (out of control) growth can lead to reduction in social welfare, due to waste, pollution, huge fluctuations of business cycles, and negative mental, physical, and spiritual effects on humans. Efficiency (saving of recourses) is very important in social welfare improvement (respect of the creation and individuals). Financial markets stability (normal return) and low risk to attract long-term investments and prevent speculators and opportunists through regulations improves the wealth of the investors and their utility. We cannot accept an action, which increases some individuals' utilities, but one individual's utility is decreasing because all individuals are equal (have the same "worthiness"). Thus, the criterion must be objectively measured and a Pareto-Optimal one.[23]

The giant out-of-control private institutions and firms are concerned mainly about their profits:

$$\max \ \pi_t = f(R_t, \ \overline{\xi}_t, \ w_t, \ i_t, \ \varphi_t, \ \sigma_t^2) \quad (2)$$

where, π_t = profit (or the market value of liabilities and equity), R_t = revenue (P_t x Q_t), $\overline{\xi}_t$ = executives' compensation, w_t = real wage, i_t = cost of capital, φ_t = *a* firm specific effect, and σ_t^2 = *a* risk factor.

Private businesses are producing where marginal cost equals to marginal revenue ($MC_t = MR_t$); actually, the uncontrolled private firm is becoming gradually a monopolist, with lowest output and higher prices, through risk-seeking processes. Their first concern is the reduction of the labor cost, the increase in earnings, the determination of CEOs' pay by themselves, and the maximization of the market price of their stocks. When a state does not optimize its social welfare, experiences tremendous social cost (welfare losses). The social benefits (full employment, low risk, moderate interest rates, price stability, balanced growth, high saving and closed

to zero debts and deficits, reasonable money supply, and stability in financial markets), due to optimal public policy, must exceed the social costs, due to deregulation and huge gaps between the potential economic values and the actual ones. These social benefits and costs can be measured with a social loss function. Thus, a loss to society function[24] can be expressed as a weighted average of deviations of important macro-variables from their targets (optimal values), like unemployment from its target, risk, interest rates (short-term and long-term), inflation, output, saving, money supply, trade balance, national debt, and financial market from their potential levels,[25]

$$L = w_u(u-u^*) + w_R(d-d^*) + w_{i_{ST}}(i_{S-T} - i^*_{S-T}) + w_{i_{LT}}(i_{L-T} - i^*_{L-T}) + w_\pi(\pi - \pi^*) + w_q(\dot{q}^* - \dot{q}) + w_s(s^* - s) + w_m(\dot{m}^s - \dot{m}^{*s}) + w_{ta}(\dot{ta}^* - \dot{ta}) + w_{nd}(\dot{nd} - \dot{nd}^*) + w_{SMI}(g_{SMI^*} - g_{SMI}) \tag{3}$$

where, $\Sigma w = 1$, L = the loss to society, u = the unemployment rate, d = risk or crisis factor (TED spread= $i_{LIBOR} - i_{RF}$), i_{S-T} = nominal short-term interest rate (federal funds rate), i_{L-T} = nominal long-term interest rate (Treasury bond rate or AAA corporate bond rate), π = inflation rate, $\dot{q}$ = growth of real output, s = saving rate (as percentage of the disposable income), $\dot{m}^S$ = growth of money supply, $\dot{ta}$ = growth of trade account balance, $\dot{nd}$ = growth of national debt, g_{SMI} = growth of the stock market index, an "*" on a variable denotes the target rate of the variable ($u^* \cong 0$, $d^* \cong 1\%$, $i^*_{S-T} \cong r^*$, $i^*_{L-T} \cong r^* + d^*$, $\pi^* \cong 0, \dot{q}^* \cong 3\%$, $s^* \cong 25\%$, $\dot{m}^{*S} \cong 4\%$, $\dot{ta}^* \cong 0$, $\dot{nd}^* \cong 0$, g_{SMI^*} = 6%),[26] w's = the weights, and r^* = the real risk-free rate of interest (= $i_{TB} - \pi$). Any deviation of the actual value of the above variables from their targets will cause a loss for the society.

The social objective will be the minimization of this social loss (L).[27] When social losses are increasing the financial market is deteriorated and the economy is moving toward recession. The opposite when the social losses are declining or social benefits are improving. Then, the value of this social loss could predict the forthcoming bear financial market and the creeping recession. Public policies (monetary, fiscal, trade) have to work towards these target values of the variables. Individuals must try to satisfy the social objective of higher savings and lower debt; the government has to become more efficient, more independent, and to reduce its deficits and debt; private enterprises have to be regulated for the benefits of the people. Through incentives, regulations, education, and a more social policy, the social loss can be minimized and the economy could be at its potential level (absolutely full employment, $L \to 0$).

III. ESTIMATION RESULTS AND EMPIRICAL EVIDENCE

The data, taken from *economagic.com*, are monthly from 1959:01 to 2009:05. They comprise spot exchange rate (S), money supply (M2), consumer price index (CPI),

federal funds rate (i_{FF}), 3-month T-bill rate (i_{RF}), 3-month deposit rate (LIBOR) (i_{3mdl}), government bonds rate (i_{GB}), corporate bond rates (i_{AAA}) and (i_{BAA}), nominal (Y) and real (Q) GDP, private consumption (C), private investment (I), real risk-free rate of interest (r^*), risk premium (d=TED spread = i_{LIBOR}-i_{3MTB} or d = P_{Gold}), exports (X), imports (M), current account (CA), unemployment rate (u), taxes (T), government expenditures (G), budget deficit (BD), national debt (ND), personal saving rate (psr), price of gold (P_{Gold}), price of oil (P_{oil}), and stock market index (DJIA) for the U.S. economy.

We started with the calculations of the loss to society function, eq. (3) and the results are presented in Tables 1 and 2. As target values of our variables, are those

Table 1
The Loss to Society (L) Measures [eq. (3)] for the U. S. A.

Year		$\bar{L}$	σ_L	$CV = \frac{\sigma_L}{L}$	*Year*		$\bar{L}$	σ_L	$CV = \frac{\sigma_L}{L}$
1960	**R**	2.894	3.882	1.341	1986		2.921	**6.904**	2.364
1961	**R**	2.136	3.803	1.780	1987		**4.713**	**10.019**	2.126
1962		**4.726**	5.405	1.144	1988		2.865	3.902	1.362
1963		1.579	5.950	3.768	1989		2.497	5.776	2.313
1964		1.556	3.640	2.339	1990	**R**	**5.892**	**7.603**	1.290
1965		2.659	4.199	1.579	1991		2.809	**6.208**	2.210
1966		**5.959**	4.759	0.799	1992		**4.623**	3.730	0.807
1967		2.958	4.962	1.677	1993		3.584	3.737	1.043
1968		3.882	5.583	1.438	1994		3.719	4.810	1.293
1969	**R**	**6.042**	4.324	0.716	1995		0.857	2.988	3.487
1970	**R**	**5.023**	**6.156**	1.226	1996		2.268	3.977	1.754
1971		**4.633**	**6.070**	1.310	1997		1.909	**7.084**	3.711
1972		3.582	3.345	0.934	1998		4.080	**9.691**	2.375
1973	**R**	**5.727**	**8.075**	1.410	1999		2.712	5.163	1.904
1974	**R**	**11.794**	**6.294**	0.534	2000		**5.142**	5.460	1.062
1975		2.417	**10.406**	4.305	2001	**R**	**5.894**	**7.438**	1.262
1976		**5.545**	4.387	0.791	2002		**7.509**	**6.428**	0.856
1977		**8.870**	4.645	0.524	2003		2.649	5.691	2.148
1978		**5.069**	**7.972**	1.573	2004		**6.045**	2.868	0.474
1979		**6.948**	4.797	0.690	2005		**5.206**	4.138	0.795
1980	**R**	**5.934**	**7.612**	1.283	2006		2.349	4.140	1.762
1981	**R**	**7.760**	3.910	0.504	2007		4.008	4.788	1.195
1982	**R**	**5.275**	**7.568**	1.435	2008	**R**	**9.166**	**7.665**	0.836
1983		**4.886**	3.707	0.759	2009	**R**	ongoing		
1984		**6.543**	5.805	0.887					
1985		4.320	4.040	0.935					

Note: $w_x = \frac{1}{11}$; this calculation has been done with eq. (1); the average loss from 1960 to 2008 was $\bar{L}$ =4.536; and the average volatility of the loss was σ_L =5.993; R= periods of recessions; CV=coefficients of variation.

Source: Economagic.com.

Table 2
The Loss to Society (L) Measures [eq. (3)] for the U.S.A. during Periods of Recessions and Bear and Bull Markets Periods

Markets	*Periods*	$\overline{L}$	σ_L	*Measurements*
R	1960:04-1961:02	2.894	3.882	low
⇑ Bull	1960:02-1966:01	2.564	4.513	low
⇓ Bear	1966:02-1970:05	5.088	5.242	high
R	1969:12-1970:11	5.533	5.240	high
⇑ Bull	1970:05-1972:12	3.999	4.720	low
⇓ Bear	1973:01-1974:11	8.823	7.896	high
R	1973:11-1975:03	8.761	7.185	high
⇑ Bull	1974:12-1987:08	5.299	6.277	high
R	1980:01-1980:07	5.934	7.612	high
R	1981:07-1982:11	6.518	5.739	high
⇓ Bear	1987:09-1987:11	17.786	12.543	extremely high
R	1990:07-1991:03	5.892	7.603	high
⇑ Bull	1987:12-1999:12	3.113	5.633	low
⇓ Bear	2000:01-2002:09	6.509	6.246	high
R	2001:03-2001:11	5.894	7.438	high
⇑ Bull	2002:10-2007:09	3.818	4.591	low
⇓ Bear	2007:10-2009:05	8.782	7.160	high
R	2007:12-current	9.166	7.665	high

Note: The calculation has been done with eq. (1); the average loss from 1960 to 2008 was $\overline{L} = 4.536$ and the average volatility of the loss was $\sigma_L = 5.993$; ⇑ denotes bull market; ⇓ denotes a bear market; and R=periods of recessions.
Source: *Economagic.com*.

given in the previous section and the weights are considered equal $\left(w_j = \frac{1}{11} \right)$. The results show that in periods of recessions (R) and during bear markets ones the loss to society (L) was high (above the average, $\overline{L} = 4.536$). During periods of bull markets, the loss was low. The economy has to improve its macro-variables bringing them towards their target values. Thus, an increase in the social loss can predict a financial and a real crisis (recession).

Then, the correlation coefficients and a Granger causality test between all these variables are presented in Tables 3a and 3b. We see that the high federal funds rate and the high interest rates in general, the fall in the financial markets, and reduction in exports have cause a decline in the U.S. production and income. The increase in unemployment and in L-T interest rate has affected negatively the stock market.

Table 3a

Correlation Coefficients and Pairwise Granger Causality Tests in the U.S. Economy

U.S.	*y*	*q*	*gdp*	*rgdp*	*djia*	p_{oil}	i_{FF}	P_{Gold}	*u*	*cpi*
y ⇒	(+1.00)	(+0.99) 10.13***	(+0.99) 2.04	(+0.98) 9.12***	(+0.51) 1.57	(+0.93) 3.25**	(-0.15) 1.37	(+0.96) 3.77**	(+0.27) 6.90***	(+0.99) 6.31***
q	(+0.99) 8.57***	(+1.00)	(+0.99) 8.99***	(+0.99) 0.24	(+0.55) 0.11	(+0.92) 3.59**	(-0.09) 0.37	(+0.94) 6.07***	(+0.20) 9.53***	(+0.97) 6.31***
gdp	(+0.99) 2.93*	(+0.99) 10.26***	(+1.00)	(+0.99) 9.63***	(+0.51) 1.56	(+0.93) 3.20**	(-0.16) 1.36	(+0.96) 4.41**	(+0.28) 6.61***	(+0.99) 6.46***
rgdp	(+0.99) 8.64***	(+0.99) 0.74	(+0.99) 9.20***	(+1.00)	(+0.55) 0.10	(+0.91) 3.59**	(-0.12) 0.36	(+0.95) 7.28***	(+0.23) 9.16***	(+0.97) 6.46***
djja	(+0.51) 5.04***	(+0.55) 4.91***	(+0.51) 5.38***	(+0.55) 4.65***	(+1.00)	(+0.60) 1.21	(+0.55) 1.21	(+0.56) 0.64	(-0.52) 1.54	(+0.47) 7.79***
p_{oil}	(+0.93) 1.03	(+0.92) 8.99***	(+0.93) 1.04	(+0.91) 10.04***	(+0.59) 0.21	(+1.00)	(+0.01) 0.09	(+0.91) 1.55	(+0.08) 3.02**	(+0.93) 28.37***
i_{FF}	(-0.15) 7.46***	(-0.09) 8.70***	(-0.16) 7.43***	(-0.12) 8.32***	(+0.55) 1.85	(+0.01) 1.19	(+1.00)	(-0.11) 0.86	(-0.94) 8.12***	(-0.19) 38.84***
P_{Gold}	(+0.96) 1.96	(+0.94) 4.67**	(+0.96) 1.94	(+0.95) 4.65**	(+0.56) 0.20	(+0.91) 2.56*	(-0.11) 1.10	(+1.00)	(+0.22) 4.00**	(+0.96) 1.81
u	(+0.27) 14.77***	(+0.20) 10.88***	(+0.28) 14.54***	(+0.23) 10.66***	(-0.52) 2.38*	(+0.08) 0.35	(-0.94) 14.48***	(+0.22) 0.28	(+1.00)	(+0.32) 0.80
cpi	(+0.99) 8.57***	(+0.97) 10.13***	(+0.99) 9.20***	(+0.97) 9.63***	(+0.47) 5.42***	(+0.93) 3.91**	(-0.19) 3.17**	(+0.96) 5.76***	(+0.32) 2.69*	(+1.00)
psr	(-0.39) 4.13**	(-0.43) 1.29	(-0.38) 4.58***	(-0.42) 0.98	(-0.45) 1.02	(-0.49) 0.25	(-0.32) 1.54	(-0.30) 2.54*	(+0.30) 0.33	(-0.34) 9.45***
nd	(+0.99) 13.41***	(+0.97) 2.64*	(+0.99) 13.82***	(+0.98) 2.47*	(+0.48) 5.62***	(+0.89) 1.76	(-0.18) 1.89	(+0.97) 4.35**	(+0.30) 2.75*	(+0.98) 19.21***
x	(+0.93) 0.57	(+0.93) 3.67**	(+0.93) 0.51	(+0.92) 3.83**	(+0.69) 2.00	(+0.93) 2.59*	(+0.13) 2.90*	(+0.95) 2.00	(-0.01) 4.41***	(+0.92) 18.03***
m	(+0.97) 3.20**	(+0.97) 3.10**	(+0.96) 2.96**	(+0.96) 3.21**	(+0.65) 2.04	(+0.96) 2.82*	(+0.08) 3.55**	(+0.96) 2.21	(+0.04) 8.45***	(+0.95) 17.25***
ca	(-0.11) 1.21	(-0.15) 0.75	(-0.12) 1.20	(-0.16) 0.77	(+0.25) 0.30	(-0.10) 1.29	(+0.27) 0.20	(+0.7) 2.87**	(-0.23) 1.94	(-0.08) 0.39
i_{RF}	(-0.20) 5.68***	(-0.13) 5.24***	(-0.20) 5.54***	(-0.15) 4.91***	(+0.49) 4.28**	(-0.05) 0.47	(+0.99) 46.74***	(-0.16) 0.86	(-0.93) 4.89***	(-0.24) 27.68***
i_{AAA}	(-0.76) 5.02***	(-0.77) 1.30	(-0.77) 5.32***	(-0.78) 1.19	(-0.17) 0.88	(-0.61) 0.22	(+0.44) 1.38	(-0.70) 2.62*	(-0.47) 5.14***	(-0.74) 15.39***
i_{20TB}	(-0.77) 7.13***	(-0.74) 3.52**	(-0.77) 7.47***	(-0.75) 3.62**	(-0.04) 8.09***	(-0.62) 0.12	(+0.46) 33.63***	(-0.71) 3.15**	(-0.55) 2.63*	(-0.77) 24.79***
s	(+0.85) 3.91**	(+0.85) 1.14	(+0.85) 3.42**	(+0.86) 0.89	(+0.50) 0.68	(+0.81) 4.76***	(-0.18) 0.16	(+0.88) 0.03	(+0.20) 0.05	(+0.83) 5.68***
TED	(+0.42) 4.85***	(+0.39) 1.85	(+0.41) 6.07***	(+0.37) 2.10	(+0.38) 3.11**	(+0.44) 1.92	(+0.19) 3.27**	(+0.52) 1.46	(-0.07) 16.50***	(+0.44) 7.67***

Note: y ⇒ x = y causes x, y = income, q = real income, gdp = GDP, rgdp = real GDP, djia = Dow Jones Industrial Average, p_{oil} = price of oil, i_{FF} = federal funds rate, p_{Gold} = price of gold, u = unemployment rate, cpi = Consumer Price Index, psr = personal saving rate, nd = national debt, x = exports, m = imports, ca = current account, i_{RF} = risk free rate of interest (3-month T-Bill rate), i_{AAA} = AAA corporate bond rate, i_{20TB} = 20 years maturity government bonds rate, s = spot exchange rate, TED = spread between 3-month LIBOR and 3-month T-Bill rate, a lower case letter is the natural logarithm of the upper one (y = ln of Y), numbers in parentheses are the correlation coefficients between the variables, and the numbers to the right of them are the F-statistics of the causality test, *** =significant at the 1% level, **= significant at the 5% level, and *= significant at the 10% level.

Source: *http://www.economagic.com*, *http://www.imfstatistics.org*, and *Eurostat*, Year Book, various issues.

Table 3b
Correlation Coefficients and Pairwise Granger Causality Tests in the U.S. Economy

U.S.	*psr*	*nd*	*x*	*m*	*ca*	i_{RF}	i_{AAA}	i_{20TB}	*s*	*TED*
y ⇒	(-0.39) 3.21**	(+0.98) 19.61***	(+0.93) 7.94***	(+0.96) 7.87***	(-0.11) 2.30	(-0.20) 3.86**	(-0.76) 0.66	(-0.77) 6.22***	(+0.85) 3.76**	(+0.42) 2.34*
q	(-0.43) 3.19**	(+0.97) 11.86***	(+0.93) 17.49***	(+0.97) 18.18***	(-0.15) 2.47*	(-0.13) 2.12	(-0.77) 0.35	(-0.74) 2.50*	(+0.85) 4.01**	(+0.39) 2.29
gdp	(-0.38) 3.15**	(+0.99) 19.57***	(+0.93) 8.07***	(+0.96) 8.01***	(-0.12) 2.31	(-0.20) 4.10**	(-0.77) 0.69	(-0.77) 6.62***	(+0.85) 3.84**	(+0.41) 2.54*
rgdp	(-0.42) 3.12**	(+0.98) 11.83***	(+0.92) 17.93***	(+0.96) 18.72***	(-0.16) 2.50*	(-0.15) 2.29	(-0.78) 0.33	(-0.75) 2.73*	(+0.86) 4.39**	(+0.37) 2.57*
djia	(-0.45) 13.17***	(+0.48) 6.78***	(+0.69) 2.49*	(+0.65) 1.90	(+0.25) 1.06	(+0.49) 3.74**	(-0.17) 7.99***	(-0.04) 3.24**	(+0.50) 1.01	(+0.38) 3.03**
p_{oil}	(-0.49) 1.41	(+0.89) 12.24***	(+0.93) 2.94*	(+0.96) 4.45**	(-0.10) 0.95	(-0.05) 0.10	(-0.61) 4.93***	(-0.62) 1.03	(+0.81) 0.88	(+0.44) 6.63***
i_{FF}	(-0.32) 2.43	(-0.18) 6.58***	(+0.13) 2.31*	(+0.08) 4.37**	(+0.27) 1.03	(+0.99) 2.35*	(+0.44) 32.34***	(+0.46) 3.05**	(-0.18) 1.08	(+0.19) 1.74
p_{Gold}	(-0.30) 1.57	(+0.97) 0.29	(+0.95) 1.23	(+0.95) 0.14	(+0.07) 5.04***	(-0.16) 1.71	(-0.70) 0.80	(-0.71) 0.80	(+0.88) 5.76***	(+0.52) 3.44**
u	(+0.30) 0.14	(+0.30) 6.69***	(-0.01) 3.28**	(+0.04) 7.02***	(-0.23) 4.94***	(-0.93) 10.63***	(-0.47) 3.17**	(-0.55) 2.72*	(+0.20) 1.95	(-0.07) 1.89
cpi	(-0.34) 2.75*	(+0.98) 13.09***	(+0.92) 6.02***	(+0.95) 7.10***	(-0.08) 2.08	(-0.24) 2.49*	(-0.74) 18.81***	(-0.77) 7.28***	(+0.83) 2.42*	(+0.44) 2.82*
psr	(+1.00)	(-0.33) 7.06***	(-0.40) 0.13	(-0.47) 0.61	(+0.34) 0.97	(-0.29) 1.41	(+0.25) 0.55	(+0.17) 2.02	(-0.27) 0.13	(-0.07) 1.34
nd	(-0.33) 5.22***	(+1.00)	(+0.93) 3.19**	(+0.95) 4.62***	(-0.05) 1.24	(-0.22) 1.01	(-0.77) 0.81	(-0.79) 0.91	(+0.88) 3.83**	(+0.47) 2.34*
x	(-0.40) 3.46**	(+0.93) 10.33***	(+1.00)	(+0.98) 1.18	(+0.15) 1.60	(+0.07) 3.63**	(-0.56) 1.71	(-0.61) 3.59**	(+0.83) 0.73	(+0.61) 6.65***
m	(-0.47) 3.27**	(+0.95) 10.96***	(+0.98) 4.69***	(+1.00)	(-0.05) 1.60	(+0.03) 3.00**	(-0.65) 1.31	(-0.65) 6.45***	(+0.84) 1.30	(+0.49) 3.99**
ca	(+0.34) 3.16**	(-0.05) 1.45	(+0.15) 4.69***	(-0.05) 1.18	(+1.00)	(+0.21) 0.18	(+0.42) 0.58	(+0.18) 1.74	(-0.02) 0.94	(+0.64) 0.87
i_{RF}	(-0.29) 2.29	(-0.22) 6.79***	(+0.07) 1.55	(+0.03) 4.12**	(+0.21) 1.47	(+1.00)	(+0.45)136.61***	(+0.50) 1.92	(-0.22) 1.12	(+0.12) 0.23
i_{AAA}	(+0.25) 3.15**	(-0.77) 9.48***	(-0.56) 1.07	(-0.65) 3.17**	(+0.21) 1.49	(+0.45) 15.45***	(+1.00)	(+0.86) 12.33***	(-0.80) 2.81*	(+0.02) 1.93
i_{20TB}	(+0.17) 3.05**	(-0.79) 9.80***	(-0.61) 0.51	(-0.65) 2.22	(+0.18) 1.41	(+0.50) 9.60***	(+0.86) 495.24***	(+1.00)	(-0.70) 1.49	(-0.25) 0.52
s	(-0.27) 0.93	(+0.88) 1.11	(+0.83) 4.99***	(+0.84) 4.80***	(-0.02) 2.17	(-0.22) 0.04	(-0.80) 0.84	(-0.70) 1.52	(+1.00)	(+0.38) 2.83*
TED	(-0.07) 1.79	(+0.47) 0.60	(+0.61) 2.76*	(+0.49) 4.15**	(+0.64) 1.70	(+0.12) 9.80***	(+0.02) 4.61***	(-0.25) 6.27***	(+0.38) 0.19	(+1.00)

Note: See, Table 3a.
Source: See, Table 3a.

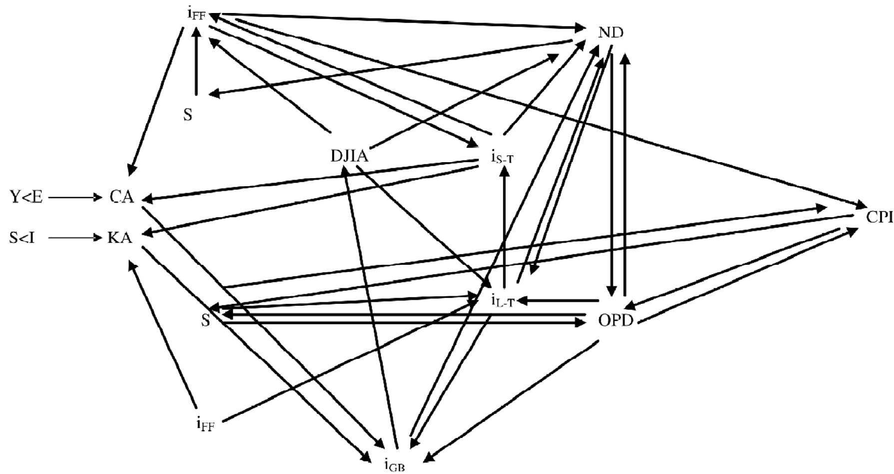
The high income, the high risk, and the devaluation of the dollar have caused the increase in the price of oil. The price of gold (revealing high risk) went up, due to high debt, high income, and low interest rates. Unemployment has been caused by low production, high price of oil, high risk (price of gold), reduction of exports, increase in imports, and reduction in interest rates. Inflation has been caused by an expansionary monetary policy (reduction in federal funds rate), high income, high stock prices, high price of oil, high national debt, from imports, high risk (high TED). Savings have decline, due to high stock prices (wealth effect), high debts, and high imports. National debt has been caused by high oil prices, high unemployment, high inflation, and low interest rates. Exports have declined, due to low production and high unemployment. Imports are increasing because of the high income, high price of oil, high inflation, and devaluation of the dollar. The current account deficit has been caused by uncertainty, high unemployment, and low production. The interest rates have been caused by production, financial markets, monetary policy, unemployment, prices, and risk. The dollar has devaluated, due to high income, risk, inflation, national debt, and monetary policy. Finally, the risk (TED) has been caused by high income (high demand), high oil prices, high price of gold, high debts, and devaluation of the dollar.

Further, Graph 1 plots the causality and the two-way causation for the major U.S. macro-variables (CA, KA, S, i_{FF}, i_{GB}, i_{S-T}, i_{L-T}, ND, OPD, and CPI). As Graph 1 (12 lags) reveals, there is a significant causal relationship among the economic variables (the arrows show the direction of causality). The F-statistics of this Granger causality test and the correlation coefficients between the two variables in Graph 1, are given in Tables 3a and 3b. Graph 2 shows the growth of real income and the yield curve spread ($i_{10YTB} - i_{RF}$). As the yield curve spread (YCS) is increasing the economy is experiencing recessions. Graph 3a, by using a Hodrick-Prescott Filter, gives the loss to society measures from eq. (3), its trend, and its cycle. Graph 3b gives the monthly loss to society measures and uses a Hodrick-Prescott Filter for the monthly loss to society function. As it shows, after 2005 the social loss is increasing very sharply. Lastly, Graph 3c depicts the monthly loss to society (L) and the exponential smoothing (Holt-Winters-No Seasonal), which forecast the trend of the loss function. When the loss to society is increasing, the financial market is falling and the economy is going to a recession. Thus, this function can predict a bull or bear financial market and its effect on the real economy.

IV. DEREGULATION, GLOBALIZATION, AND PUBLIC POLICY IMPLICATIONS

We have seen, lately, significant trends driving the fundamental changes in the structure and scale of all financial services industries in our free-market economies. These trends include broad deregulatory reforms of financial services, globalization of markets, widespread technological advances, different code of ethics[28] among participants, and lack of social responsibility.[29] As a direct consequence of the above alterations, the pace of change was accelerating, clients had more varieties, more

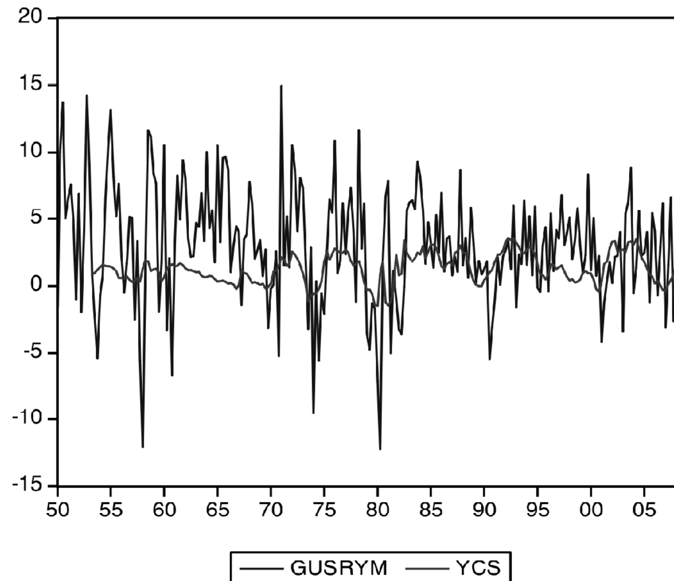
Graph 1: Causality and Two-Way Causation (lags: 12) in the U.S. Economy



Note: See, Tables 3a and 3b. The arrow (→) shows the direction of causality. Y=income, E=aggregate Spending by U.S. residents (absorption), CA=current account, KA=capital account, S=spot exchange rate, i_{FF}=federal funds rate, i_{GB}=government bonds rate, $i_{S\text{-}T}$=short-term interest rate (3-month T-Bill rate), $i_{L\text{-}T}$=long-term interest rates (AAA and BAA corporate bonds rates), DJIA=Dow Jones Industrial Average Index, ND=national debt, OPD=oil price domestic, and CPI=consumer price index.

Source: See, Table 3a.

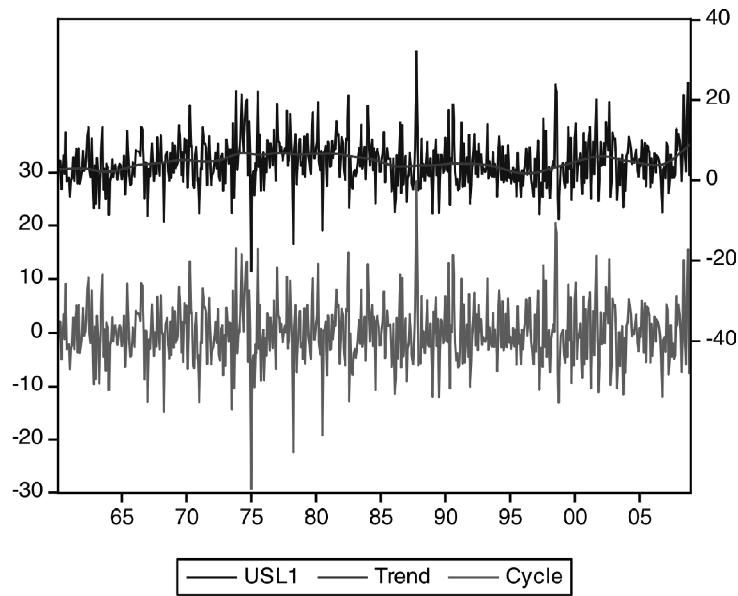
Graph 2: Real GDP growth and the Yield Curve Spread



Note: GUSRYM=growth of the U.S. Real GDP and YCS=yield curve spread (US10YTB-STT3M).

Source: *Economagic.com*

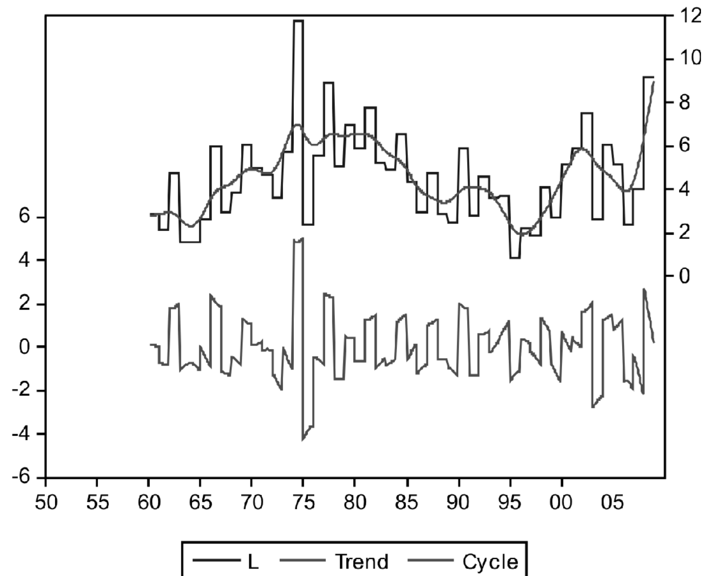
Graph 3a: The Loss to the U.S. Society and the Hodrick-Prescott Filter (lambda = 14400)



Note: Graph of eq. (3) the Social Loss (L) for the U.S. economy (USL1).
Source: *Economagic.com*.

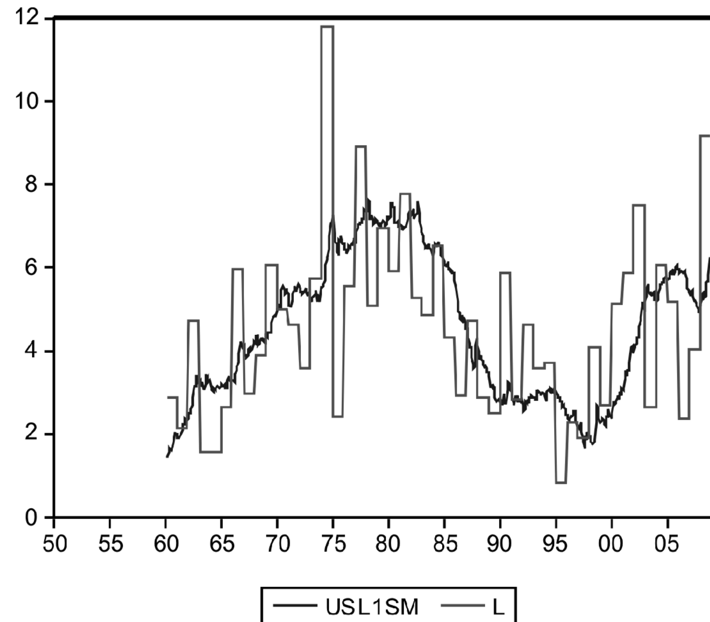
Graph 3b: The Monthly Loss to Society Function (L) and the

Hodrick-Prescott Filter (lambda=14400)



Note: See, Graph 3a, L=the monthly loss function.
Source: *Economagic.com*

Graph 3c: The Monthly U.S. Loss to Society (L) and its Exponential Smoothing



Note: See, Graph 3a and 3b; USL1SM= exponential smoothing (Holt-Winters-No Seasonal); and L= the monthly measures of social losses.
Source: Economagic.com

information (actually, misinformation or too many information that they cannot keep track, utilize, and absorb them), more equipments, but more complexity, which was very difficult to make a long lasting efficient decision; competition was increasing, new risky instruments were introduced, margins were shrinking, more risky investments were seeking to increase expected returns, privatizations to increase "efficiency", cross-industry entry and consolidation were accelerating, and internationalization of business was imposed everywhere. These powerful forces were affecting all financial services providers at many different levels and they required a new business model, but we (the authorities) did nothing. Of course, this behavior is common; we wait until the problem will appear and then, we try to find solutions.

Commercial banks should be separated from investment banks in order to avoid another crisis like the U.S. is experiencing and with its extension to the entire world; according to former Federal Reserve Chairman Paul Volcker, who said, "Maybe we ought to have a kind of two-tier financial system". Commercial banks would provide customers with depository services and access to credit and would be highly regulated, while securities firms would have the freedom to take on more risk and practice trading, "relatively free of regulation," Volcker said.[30] The best for our

economy will be to regulate all the financial institutions because the crisis that they create is affecting the real sector of the economy (income and employment) and small investors are putting their pension funds and other savings to securities and financial assets. Federal Reserve Chairman Ben S. Bernanke urged a sweeping overhaul of U.S. financial regulations in an effort to smooth out the boom-and-bust cycles in financial markets. Another factor that has affected drastically our financial markets is technology, which has made industry structure irrelevant. The changes occurring, lately, were facilitated by deregulation and technology at the same time. The distribution of services to customers is taking place through different channels: the Internet, ATMs, a branch, a phone center, a physical person, etc. on a seven-by-twenty-four weekly-hours basis. It learns and listens and moves on an automated basis based on information. In this "New Economy" regulation would be very difficult.[31] We have just started to see the effects of this out-of-control financial structure and regulators will have a hard job ahead of them keeping track of these exotic developments, which are moving so fast. Also, globalization already proved to us that is disastrous. Corruption in business and government is another plague to our uncontrolled free-market. Also, there has been a rapid rise in cross-country mergers (giant oligopolies, which is costly to bail them out) and international markets have become increasingly linked.[32] This rise has made financial firms international. From the board of directors down to the trader or loan officer, everyone must understand his role in risk management and know the limitations.

In addition, there are many arguments against the extreme executive compensations during the last years, but at the same time there are a few, who are in defense of these anti-social abuses of the "free-market" (value-free) system.[33] The defenders say that "the U.S. economy has done extremely well, so the executives must get these compensations". Of course, corporate profits have grown, but their growth is about the rate of growth of the economy. Then, CEOs have not added any exceptional value to the economy. In 1980, the compensation of the average chief executive officer was forty-two times that of the average worker $\bar{C}_{CEO} = 42\bar{w}$; the peak was in 2000 $\bar{C}_{CEO} = 531\ \bar{w}$; in 2004 it became $\bar{C}_{CEO} = 280\ \bar{w}$;[34] and in 2006 $\bar{C}_{CEO} = 277\ \bar{w}$. Table 4 gives the average annual salaries of CEOs and workers and the minimum wage per hour. Besides, the total compensation of the top five corporate executives in 2007 is given in Table 5. In 2007, the total revenue of the 500 largest companies in the U.S. was $10,602 billion; their profit was $645 billion and their profit as a percentage of revenue was 6.09%; the compensation of their CEOs was $5.5 billion (maximum executive compensation was $100.3 million). Their 2nd executives received $2.17 billion (maximum $72.5 million), their 3rd executives received $2.08 billion (maximum $71.4 million), their 4th executives were compensated with $1.74 billion (maximum $58.4 million), their 5th executives cost $1.66 billion (maximum $49.1 million). Total pay to top five corporate executives

was $13.14 billion, which was 2.04% of the corporate profits.[35] Table 6 gives the five top earners in 2008. Sanjay K. Jha, CEO of Motorola had a total compensation of $104 million. Table 7 presents the CEO compensation of firms, which received government bailouts. The U.S. government gave $50 billions aid to Citigroup and its CEO, Vikram S. Pandit, was compensated with $38.2 million. This white collar crime against our society has to stop once and for all from our regulators and not from the shareholders because they have no power to do it. France banned companies that get state aid from issuing options to top managers, and it limited other forms of compensation.[36] Chesapeake Energy holders criticized the board for paying the CEO $112 million in 2008 as the stock fell.[37]

Then, what is the remedy, at least for the U.S.? EMU and EU country-members are in big trouble because of the imposed experimental integration. The country has to become self-sufficient ($Y = E$), to increase saving ($S = I$), to reduce trade deficits ($X = M$), to reduce national debt (more efficient public sector with less wasteful), to control inflation, to appreciate the dollar $\left(S = 1\frac{\$}{euro}\right)$, to reduce demand for oil (alternative sources of energy), to regulate and stabilize the stock market (lower return and lower risk, too, and to control derivatives and speculators), to put a cup on the executive compensations, to improve the trust in the markets, and to keep relatively low level for the target rate of monetary policy (i_{FF}) and moderate rates for the entire economy.[38] Full employment must be the main objective of public policies. The U.S. needs to revise its trade and foreign policy and to improve its relationship with the other nations. It has only enemies around the world. There is no need to start a new cold war! Moderation in growth, in consumption, in foreign affairs; self-sufficiency, and certainty are necessary. We need to educate people to be perfect "persons" (personalities)[39] and not "consumers" and "spendthrifts". To perfect our economy and our society, we need a perfect rule ("Golden Rule") and not the current frauds and exaggerations in all spectrums of life.[40] Thus, moderation, efficiency, and honesty must be the objective of politicians and bureaucrats who are public servants. But, unfortunately, they try to increase their size and influence (the leviathan syndrome). The fiscal demands (government expenditures and budget deficits) of the government help financial institutions to develop close and in their favor relationships with politicians who became the supporters of deregulations. Federal Reserve System (main regulator of bank holding companies) and the Treasury (through the Office of the Comptroller of the Currency regulates the national banks) wish to be the main supervisors of financial institutions with expanded powers. Then, there is a conflict between regulators over which one would be the dominant regulator in the future, and they decided neither one of them.

Finally, Barack Obama has to transform the U.S. economy, which has reached the worst financial crisis since the Great Depression. It was needed another economic stimulus bill to lead the country to a recovery. The country needs jobs and

Table 4
Average Compensations

	Current Dollars						*1980 Dollars*					
	CEO	*Growth % p.a.*	*Worker*	*Growth % p.a.*	*Min Wage p.h.*	*Growth % p.a.*	*CEO*	*Growth % p.a.*	*Worker % p.a.*	*Growth p.h.*	*Min Wage % p.a.*	*Growth*
1980	$625,000		$14,900		$2.3		$625,000		$14,900		$2.3	
2004	$9,840,000	61.4%	$35,000	56.2%	$7.16	8.8%	$5,179,000	30.4%	$18,420	0.98%	$3.77	2.7%
2006	$13,800,000	20.1%	$49,850	21.2%	$7.63	3.3%	$6,900,000	16.6%	$24,920	17.6%	$3.81	0.5%
2007	$12,200,000	-11.6%	-		$7.93	3.9%	$5,893,700	-14.6%	-		$3.83	0.5%
2008	-		-		$8.07	1.8%	-		-		$3.77	-1.6%
2009	-		$55,590	3.8%	$8.55	5.9%	-		$25,970	1.4%	$4.00	6.1%

Source: Bogle (2005, Table 1), Jerry Goldberg (jgfortunate2500list.com), and author's calculations.

Table 5
Compensation of Executives of the Top Ten Companies in 2007 ($ millions)

Companies	*Revenue*	*Profit*	*Total Compensation of Top Five Executives*	*% to Profits*	*Top Ten CEOs*	*Compensation of CEOs*	*% to Profit*
Goldman Sachs	87,968	11,599	321.7	2.8%	Whitaker/Stephenson (AT&T)	100.3	0.84%
Freeport MacMoRan	17,876	2,977	168.9	5.7%	Ray Irani (Occidental Petroleum)	77.6	1.43%
Bear Stearns	16,151	233	155.9	66.9%	Richard Adkerson (Freeport MacMoRan)	74.1	2.48%
AT&T	118,928	11,951	137.6	1.2%	Lloyd Blankfein (Goldman-Sachs)	70.3	0.60%
Occidental Petroleum	20,206	5,400	131.8	2.4%	J. J. Mulva (Conoco Phillips)	50.5	0.42%
Merrill Lynch	64,217	-7,777	109.5	-1.4%	Lawrence Ellison (Oracle)	48.4	1.12%
Oracle	17,996	4,274	105.1	2.5%	David Weidman (Celanese)	48.3	11.27%
News Corp.	28,655	3,426	96.9	2.8%	Angelo Mozilo (Countrywide Fin')	48.1	Loss
J P Morgan Chase	116,353	15,365	96.2	0.6%	Bob Simpson (XTO Energy)	47.3	2.8%
Comcast	30,895	2,587	90.3	3.5%	Forsee/Hesse (Sprint/Nextel)	43.0	Loss

Source: Jerry Goldberg (jgfortunate2500list.com).

Table 6
Executive Pay (the Top Earners) in 2008 ($ millions)

Company	*CEO*	*Base Salary*	*Annual Incentives*	*Stock-Option Grants*	*Restricted-Stock Grants*	*Performance Awards*	*Total Direct Compensation*
Motorola	Sanjay K. Jha	$0.5	-	$67.5	$36.0	-	$104.0
Occidental Petroleum	Ray R. Irani	$1.3	$3.6	-	-	$45.0	$49.9
Walt Disney	Robert A. Iger	$2.0	$13.9	$28.5	-	$5.3	$49.7
Citigroup	Vikram S. Pandit	$1.0	-	$8.4	$28.8	-	$38.2
Philip Morris International	Louis C. Camilleri	$1.6	$9.5	-	$25.4	-	$36.4

Source: The Wall Street Journal, April 3, 2009, p. B4.

Table 7
CEO Pay at Companies Receiving Government Bailouts

Company	*Name*	*Salary (millions)*	*Long-term Incentives (millions)*	*Total Direct Compensation (millions)*	*Government Aid (billions)*
Citigroup	Vikram S. Pandit	$1.0	$37.3	$38.2	$50.0
Bank of America	Kenneth D. Lewis	$1.5	-	$1.5	$45.0
J.P. Morgan	James Dimon	$1.0	$19.9	$20.9	$25.0
Wells Fargo	John G. Stumpf	$0.9	$7.9	$8.8	$25.0
Goldman Sachs	Lloyd C. Blankfein	$0.6	-	$0.6	$10.0
Morgan Stanley	John J. Mack	$0.8	-	$0.8	$10.0

Source: The Wall Street Journal, April 3, 2009, p. B4.

investments in public works, which will create employment and income. The tax burden must be shift from the poor people to the wealthy ones and to corporations. The country needs to abandon a quarter-century of deregulation and the creation of this current corrupted and anti-social monster, the "free-market" and value-free system. The health-care system needs to be revised and the free-trade has to benefit, first, the American citizens and not the allies (actually, the American policies are favoring one ally and nobody else). The energy and food problems must be resolved through correct pricing policies. The national debt, the budget and trade deficits, and the private debts have to be controlled. Savings must be a national objective for the future of the country. The country needs a new social-economic-political-foreign policy, which will be imposed gradually for the benefits of Americans. The solution could be regulation of the free-market to a level that social welfare is maximized (social loss is minimized, $L \rightarrow 0$). The Federal Reserve was refusing to identify the recipients of almost $2 trillion of emergency loans from American taxpayers or the troubled assets the central bank was accepting as collateral. Unfortunately, some big U.S. firms are reincorporating in Switzerland, helping them avoid expected legislation aimed at companies in tax havens.[41]

V. CONCLUDING REMARKS

The U.S. data revealed a big deviation from their target values and the high loss to society predicted the creeping financial and real crises. Undeniably, authorities around the world need more coordinated policies and cooperation. We cannot allow financial institutions to become too big (anti-trust laws must be enforced) and then, too costly to fail. This increased interdependence among economies makes the need for collaboration and co-regulation necessary in all countries. The effectiveness of monetary policy, especially in EMU, had being diminished. Sharp declines in asset prices hit the balance sheets of firms and individuals and make them less creditworthy. Financial sector needs supervision, regulation, and correct rating of its assets. Globalization has to slow down and be abandoned, otherwise the coming crisis will be the last. The leaders of the G-20 economies met in November 2008 in Washington, in April 2009 in London, and recently (September 26-27, 2009) in Pittsburgh, but there were no important steps towards the solution of this global crisis. Protection of all native industries, self-sufficiency, independence, control of CEOs' compensations, and domestic social welfare maximization must be the objectives of every nation. The domestic interest must be above the global one. We cannot forget that moderation and good relationships with all the other nations are necessary, but not sufficient to maximize the social welfare of an independent and sovereign country.

Actually, the crisis (which is a moral, ethical, and political one) in the western societies has started after World War II with their arrogance, their exploitation of resources, their pride, their cold war, their abandonment of the traditional value system, their acceptance of the uncontrolled (from the authorities and regulators)

and value-free "free-market system" (controlled only by speculators), their fostering of corruption and white collar crime, their over-borrowing, their unregulated speculated futures[42] (which have raised the energy and commodity prices to some outrageous levels) and hedge-funds markets, that have caused tremendous losses to financial institutions due to low margin requirement; also, their over-consumption, the undervaluation of the U.S. dollar, and numerous other mistakes. During the year 2007, a creeping credit crisis started with troubled mortgages to sketchy overburdened borrowers, which had very unsecured jobs and very uncertain future. The financial system (international today, due to the other big mistake, the imposition of globalization) is in trouble and financial institutions are collapsing (some try to find buyers) while policy makers try to contain the problem of this vicious circle. With the share prices of many financial firms on a roller coaster, the financial crisis entered a critical stage, which affected the real sector of the declining economy.

The problem with our speculators is the margin requirements, which is only 50%. To avoid this tremendous market risk, the margin requirements must be 100%. Regulation T of the Federal Reserve Board has to be revised. Also, the SEC must prohibit the short-selling.[43] The anti-trust laws must be imposed on every firm. They cannot become giants (monopolists) and then, the Treasury and the Fed have to bail them out with our money (tax payers' money). An increased oversight of the Treasury and the Fed is needed, speculation must be curbed, and futures market has to be regulated because they affect the spot market with their outrageous scenaria and price manipulations. CEOs' salaries are provocative for our welfare and just societies; then, limits on executives' pay are necessary. Transparency and accountability for mortgage-fraud or other greedy actions by executives is important for the public to start trusting the markets. Investment banks and exotic types of financial instruments must be regulated, as the other financial institutions.

The economic and social indicators reveal that the U.S. from a moral, ethical, and just superpower is becoming less and less competitive and less friendly with the rest of the world.[44] European Union (the forced integration of 27 nations, without referenda) is a unique "innovation" in human history. It is a mixture of twenty seven nations that have lost their domestic public policies, their self-determination, their sovereignty, and of course, their future will be uncertain. All these strange evolutions have increase the global uncertainty, have caused unemployment in EU and the U.S., have reduced competitiveness, and have augment anxiety and health problems (mental and physical) to citizens. The most disastrous consequence of the current financial crisis is the immeasurable unemployment.[45] The free-market system has failed and needs more government regulation and better corporate governance. The country needs to protect domestic industries and create jobs for its citizens. The government had to bailout a corrupted financial system, especially when the federal deficit and the national debt are astronomical.[46] But, it had no other option, except to "rob responsible Americans and pay the robbers of the

financial market".[47] Then, what are the social benefits? Why we need these global changes, innovations, and "evolutions", which are against humanity? The current financial crisis (with a combination of large failures, costly bailouts, and deep recessions) might be able to change the perception of the social welfare effects of the thirty years of deregulation. We hope!..

Lastly, countries have to be self-sufficient (even exercising protectionism for their domestic industries); promoting, first, the primary sector (agriculture); second, the secondary one (manufacture); and lastly, the tertiary sector (services). An economy specializing only in services has no future. The country must produce more goods and services that are needed for domestic consumption and export the excess production. The nation has to have a high saving rate, too (25% of the disposable income). The financial markets and the entire economy have to be controlled and regulated, and every firm must comply with the socially imposed constraints. The ultimate objective of a country is maximization of its social welfare. We need a worldwide governmental intervention to support national banking systems and national investment banks, after the disappearance of all five international oligopolistic U.S. investment banks.[48] We must learn that we cannot live beyond our means indefinitely. Sachs (2008) said that "the United States should approach its foreign policy using 'sustainable-development logic' rather than relying on 'militarized, us-versus-them, extremist-fundamentalism logic'". The cost of these unceasing wars is enormous in human lives and in resources, which affect negatively the economy and the reputation of the country.[49] Without an investment in sustainable development, the U.S. will lose the competitiveness race. The global uncertainty, the deregulation of financial markets, the corruption in business and politics, the illegal migration, and the other domestic problems, due to globalization and integration are going to change our economic system. The only prediction that we can do for the future, after the current worst global recession, is that this new economic system will be the last in our socio-economic history, except if we will decide to go back to a value oriented system. These corrupted people in financial markets needs some knowledge in value-oriented welfare economics and business ethics. Then, our educational system needs some reforms to be able to teach businesses and not to learn from them, as it is going on, lately.

Notes

1. Economics/Finance Department, The Arthur J. Kania School of Management, University of Scranton, Scranton, PA 18510, U.S.A. A previous version presented at the 7th International Conference on Finance of the ATINER in Athens, Greece, July 6-9, 2009. I would like to acknowledge the assistance provided by Brandon Dragone, Marina Kallianiotis, and Mario Migliori. The usual disclaimer applies. Then, all remaining errors are mine.
2. "The publics of the world broadly embrace key tenets of economic globalization but fear the disruptions and downsides of participating in the global economy. In rich countries as well as poor ones, most people endorse free trade, multinational corporations and free markets. However, the latest Pew Global Attitudes survey of more than 45,000 people finds they are concerned

about inequality, threats to their culture, threats to the environment and threats posed by immigration. Large majorities feel that faith in God is a necessary foundation for morality and good values, and similar majorities believe society should reject homosexuality. Together, these results reveal an evolving world view on globalization that is nuanced, ambivalent, and sometimes inherently contradictory." (*The Pew Global Attitudes Project*, October 4, 2007).

3. Documentations for all the following events are available from the author upon request. They are omitted here, due to space limitations.
4. See *Transparency International* (CPI). See also, Kallianiotis (2003a and b).
5. The U.S. financial market peaked on October 9, 2007 (DJIA was 14,164.53) and troughed on March 9, 2009 (DJIA was 6,547.05); it declined by -7,617.48 points or -53.78%, and with calendar days to bottom 517. (*Bloomberg.com*).
6. From 0.8525 $/euro (October 2000), the dollar fell to 1.6001 $/euro (April 2008); a depreciation by -87.70%. (*Bloomberg.com*).
7. The credit card reform bill took effect on August 20, 2009. (*Bloomberg.com*, 8/19/2009). No more credit cards! The credit cards rate is 25% p.a. for the poor people, due to high risk premium. We overcharge the poor and small businesses with high risk premia and at the same time, we tax them by buying lottery tickets (state taxes). The national debt was on October 6, 2009: $11.932 trillion. (The estimated population of the United States is 307,050,955 so each citizen's share of this debt is $38,861.27. The National Debt has continued to increase an average of $3.96 billion per day since September 28, 2007). The country is in very high risk!
8. See, Eiteman, Stonehill, and Moffett (2010, pp. 106-134).
9. See, Mishkin and Eakins (2000).
10. Stiglitz (2009) says that "even then (when he was chairman of the Council of Economic Advisors during the Clinton administration), it was clear that derivatives posed a danger". Warren Buffett saw derivatives as "financial weapons of mass destruction". Then, the crisis was expected by any prudent person.
11. "This was the culmination of a $300 million lobbying effort by the banking and financial services industries and spearheaded in Congress by Senator Phil Gramm", as Stiglitz (2009) said, who had opposed the repeal of Glass-Steagall Act.
12. See, Kallianiotis (2003a and b).
13. See, Du, Cullinan, and Wright (2007).
14. Stiglitz (2009, p. 4) says that "The rating agencies, like the investment banks that paying them, believed in financial alchemy - that F-rated toxic mortgages could be converted into products that were safe enough to be held by commercial banks and pension funds".
15. Near-prime mortgages are often bundled into securities marketed as "Alt-A". The share of subprime mortgages that were seriously delinquent increased from 5.6% in mid-2005 to over 23% in September 2008. Alt-A mortgages saw an even greater proportional increase from a low of 0.6% to over 11% during the same period. See, Mayer, Pence, and Sherlund (2009).
16. See, *The Wall Street Journal*, September 25, 2008, pp. A1 and A6.
17. See, *The Wall Street Journal*, September 27-28, 2008, pp. A1 and A6.
18. See, *The Wall Street Journal*, September 27-28, 2008, pp. A1 and A6 and September 29, 2008, p. C5.
19. The three month Euribor was 5.318% and the three month T-bill rate was 0.460%. The TED spread was 4.858%. (*The Wall Street Journal*, October 14, 2008, p. C10).
20. Goldman Sachs applied for a New York state charter for its new banking unit rather than a federal charter. (*The Wall Street Journal*, October 14, 2008, pp. A1 and C8).

21. See, *The Wall Street Journal*, October 14, 2008, pp. A1 and A2. Later, Vladimir Putin of Russia said "investment banks, the pride of Wall Street, have virtually ceased to exist". (*The Wall Street Journal*, January 29, 2009, pp. A1 and A6).
22. Mr. Sarkozy said at the summit that, "Hedge funds cannot continue operating as they have in the past; tax havens, neither; financial institutions that are under no supervisory control – this is no longer acceptable, this is no longer possible". European leaders have also called for tougher oversight of executive compensation at the international level, as well as of derivatives. Actually, nothing will happen because the U.S. is enjoying in many sectors over more-regulated Europe in attracting investment and capital. (*The Wall Street Journal*, October 20, 2008, p. A1).
23. See, Kallianiotis (2009b).
24. See, Kallianiotis and Petsas (2006).
25. See, Kallianiotis (2004a and b and 2005).
26. A negative deviation of the stock market index ($g_{SMI}^* - g_{SMI} < 0$) reduces the total social loss, but increases the riskiness of the financial market (due to the artificial high growth of the stock market, a bubble is creating and at it burst will cause a serious financial crisis), as it happened lately.
27. Our objective must be to minimize the deviations from the target value of the variables. A negative deviation is reducing the overall social loss and a negative loss represents social benefits. We do not want a high negative L either because it means exaggeration, inefficiency, waste, and lack of optimality (Moderation is everything in our lives).
28. Business ethics are the company's attitude and conduct toward its employees (safe working environment and job security, reasonable payment practices, avoidance of extortions), its customers (safe products and good services), toward the community (protect the environment, provide employment, fair hiring practices, community involvement, compliance with the laws and regulations), its stockholders (normal return and low risk, normal executive payments), and towards the nation (uncorrupted operation, engaged in national projects, employee benefit programs, and acting anti-cyclically). The father of the philosophy of Economics (which is the mother of Finance) is Xenophon (434-355 B.C.), who has introduced this moral, ethical, and social discipline, *Oeconomicos in Greek:* (Oeconomicos=Oeconomia), from the words: oecos (oecos = household) and nemo (nemo = manage or distribute). This discipline ought to be improved with the new revealed knowledge and today, it has to minimize social problems and maximize social welfare. Unfortunately, what we did is exactly the opposite; we maximized social problems (uncertainty, unemployment, financial distress, recession) and minimized social welfare (by pursuing a minority's corrupted self-interest economic system).
29. Social responsibility is the concept that financial services businesses should be actively concerned with the welfare of society at large (welfare of their employees, investors, customers, community, and nation) because their businesses well-being depends on this society.
30. *Bloomberg.com*, March 6, 2009.
31. O'Leary (2000, p. 64) says that "… unless we homogenize regulation globally, in a cyberworld it is very hard to regulate anything on a sustained basis".
32. The deal value of cross-border mergers and acquisitions increased from $129 billion in 1993 to $1,275 billion in 1999. See also, Kallianiotis (2009b).
33. This current financial crisis will destroy the productivity of highly educated workers because they will be unemployed and will lose their training, their on job-practice, their updating, and their return on investments in higher education will decline. The growing importance of manual tasks will tend to increase the earnings of less educated workers; also, the high labor supply to services will keep wages low. Business schools will face big challenges very soon.
34. See, Bogle (2005).

35. See, Jerry Goldberg (jgfortunate2500list.com).
36. See, *The Wall Street Journal*, March 31, 2009, pp. A1 and B1.
37. See, *The Wall Street Journal*, April 28, 2009, pp. A1 and B1.
38. No high risk premia for small businesses and poor people because it is very unfair. See, Kallianiotis (2002).
39. Our educational system needs revisions. It must be more value oriented and less value-free vocational teaching imposed by the markets. The markets have to learn from our values, otherwise we do not need these anti-humane and corrupted markets.
40. In Greek, the rule is: "Pan metron ariston".
41. See, *The Wall Street Journal*, December 12, 2008, pp. A1 and B1.
42. The Commodity Futures Trading Commission (CFTC) called for new tools to assess speculators' impact on commodity prices, as a study by the futures markets regulator was inconclusive. (*The Wall Street Journal*, September 12, 2008, pp. A1and C3).
43. The effort to quash short selling gained global momentum, as Australia, Taiwan, and the Netherlands announced restrictions. (*The Wall Street Journal*, September 22, 2008, pp. A1and C1). In the U.S. most market participants are against changing these rules on exotic types of financial instruments. Nothing can be changed in the U.S. financial markets because today regulators were working for the financial market yesterday and this is their mentality, "free-market" and let the government to find solutions for the country and the citizens (greediness and selfishness). (*The Wall Street Journal*, September 23, 2008, pp. A1and A3).
44. The U.S.A. was the biggest economic power in the world and is declining daily. Greece was the biggest spiritual power on earth and is descending daily. We must grieve for the plight of these two nations and someone is responsible for this. The problem must be the bad and controlled leadership in these two "model" nations.
45. Families have been destroyed, couples have been divorced, properties have been lost, people have committed suicide, due to unemployment. An economic system with positive natural level of unemployment ($u^N > 0$) has to be changed or to be abandoned.
46. The U.S. budget deficit for the 2008 was $455 billion and the national debt was $10,311 billion on October 15, 2008. Now, the ND is $11,932 billion (10/6/2009) and the U.S. deficit was revised to a record of $1.6 trillion for the fiscal year ending September 30, 2009. (*The Wall Street Journal*, August 26, 2009, pp. A1 and A2).
47. Dr. Shannon Grimes in *Tahlequah Daily Press*, September 25, 2008.
48. New York's *Lehman Brothers* filed for bankruptcy; *Merrill Lynch* and *Bear Stearns* were bought by Bank of America and JP Morgan Chase, while *Goldman Sachs Group* and *Morgan Stanley* – formerly the two largest investment banks – restructured themselves into bank holding companies. (*Minneapolis/St. Paul Business Journal*, October 21, 2008). The realignment created a new top list of largest investment banks - which is now led by St. Petersburg, Fla.-based *Raymond James Financial*. *Jefferies & Co.* is the second-largest firm now, followed by *Greenhill & Co.* (No. 3) and *Keefe Bruyettte & Woods* (No.4). Citigroup is a U.S. holding company formed in 1998 from the merger of Citicorp (itself a holding company incorporated in 1967) and Travelers Group, Inc. The $70 billion merger included one of the largest U.S. investment banks, Salomon Smith Barney Inc., and aimed at creating a global retail financial-services business. Citicorp, whose lineage can be traced to the First Bank of the United States, was noteworthy for its pioneering installation of automated teller machines throughout its branch offices in the 1970s. Before its merger with Travelers Group, Inc., Citicorp was the largest U.S. bank and one of the largest financial companies in the world, with about 3,000 branch offices worldwide. In 1988, when Credit Suisse took control of First Boston, the First Boston brand retained a prominent positioning as the investment

banking operation was dubbed CS First Boston. In the mid 1990s, Credit Suisse initiated a comprehensive rebranding of First Boston in the United States. The *CS First Boston* investment bank was rebranded *Credit Suisse First Boston*, or "CSFB", worldwide. The terms Credit Suisse First Boston and CSFB are generally used to refer to the global investment bank, and not only the original London franchise. Credit Suisse retired the "First Boston" name from its investment banking business worldwide on January 16, 2006 in order to "allow Credit Suisse to communicate as an integrated organization to clients, employees and shareholders."

49. The Senate voted 91-5 for a $106 billion bill to pay for the wars in Afghanistan and Iraq through September 2009. (*The Wall Street Journal*, June 19, 2009, pp. A1 and A5).

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