

## UNCERTAINTY, OIL SHOCKS, MONETARY POLICY, AND THE EXCHANGE RATE ENIGMA

**Ioannis N. Kallianiotis**

UNIVERSITY OF SCRANTON, USA

The purpose of this work is to determine the effects of the oil shocks, policy instruments, and risk on the current and prospective variables for the two major economies of the world, the U.S. and the Euro-zone one. A theoretical model is used to determine the factors affecting the objective variables (output, price level, and unemployment) of these two economies by taking into consideration policy variables (i.e., money supply and federal funds rate), aggregate demand ones, and external shocks (i.e., prices of oil and gold). The dependent variables are determined by the equilibrium level of the variable in question and the unanticipated and anticipated explanatory variables. Also, a multivariate regression is run to induce the variables in question by using domestic and foreign factors, which have a causal relationship with the dependent variables and by emphasizing mostly, their effects on exchange rate. The unanticipated and the anticipated independent variables are affecting the objective variables. The global uncertainty has increased the price of gold and the U.S. debts and deficits (private and public) have caused the depreciation of the dollar, which, with the help of speculators, has heightened the price of oil and has created a commodity bubble. The western economies are moving towards stagflation and their foreign policies to a new cold war, as their way out of this global crisis.

### I. A CURRENT SOCIO-ECONOMIC HISTORICAL RETROSPECT

The creeping global uncertainty, due to the forcefully and undemocratically imposed globalization<sup>2</sup> is growing and the news from all sources (even though that they are controlled, "politically correct") are revealing this planned crisis. The war in Iraq,<sup>3</sup> the chaos in Pakistan after Bhutto's assassination, the Afghanistan turmoil, the Turkish invasion in North Iraq (Kurdistan),<sup>4</sup> the Middle East disorder,<sup>5</sup> the Kosovo confusion and injustice with its declaration of independence,<sup>6</sup> the usurp of the Greek name "Macedonia" and Greek history and symbols by Skopje,<sup>7</sup> the American interference in Europe,<sup>8</sup> the suspicious antiterrorism policies, which have infringed civil liberties,<sup>9</sup> the African anarchy and civil wars,<sup>10</sup> the corruption,<sup>11</sup> the immorality,<sup>12</sup> and the international political, economic,<sup>13</sup> and social fears (neo-barbarism) have negative effects on the faithless (neo-liberal) U.S.,<sup>14</sup> European nations, and the rest of the world.<sup>15</sup> The crude oil prices hit \$133.58 per barrel on May 22, 2008.<sup>16</sup> The stock markets are having around the world an enormous volatility, the dollar continuous to decline, and the gold hit a record of \$1,007.10 per ounce (3/18/2008).<sup>17</sup> The U.S. economy slowed sharply in the fourth quarter of 2007 ( $g_{GDP} = 0.6\%$ ) and ending with a 2.45% growth for the year 2007. For the first quarter of 2008, the real GNP grew only 0.5974%. The inflation for the 2007 exceeded 4.1%<sup>18</sup> and for the month of March 2008 reached 7.2% p.a.<sup>19</sup> Prices are going up drastically even though officials in every country manipulate the price indexes, trying to reduce inflation risk premium and pessimism of their citizens. Food shortages have caused an enormous increase in the price of food all over the world.<sup>20</sup> Also, tremendous

debts<sup>21</sup> and deficits, a credit-crunch (due to major problems in the mortgage market),<sup>22</sup> and closed to zero savings shake the financial institutions and the global “integrated” financial system. Consumer sentiment about the economy hit a 28-year low, due to surging gasoline prices (over \$4.25 per gallon), falling home prices, and a weakening job market.<sup>23</sup> A recession is at the horizon and policy makers have to find ways to stabilize this inhumane “globonomics” or better, planned “shock-onomics”,<sup>24</sup> which even Bill Gates does not like it and called for a new “creative capitalism”.<sup>25</sup>

The dollar has lost ground against the currencies of most of its major trading partners. The Federal Reserve broad trade-weighted index for the U.S. dollar shows a decline of 7.5% for the 2007.<sup>26</sup> Commodities prices increased drastically in 2007. Corn went up by 16.7%, Copper increased by 6.2%, Gold gained 31.4%, Crude oil prices jumped by 57.2%.<sup>27</sup> Stranger world! From all these “News”, it seems that expectations and speculations, which are influenced by this global uncertainty and suspicious political expediencies, affect the exchange rates and not so much the economic fundamentals of the two economies.<sup>28</sup> Tremendous volatility, uncertainty, pessimism, and convulsive reactions to any insignificant “news”, is what someone observes in today’s ignorant “global financial market”. Hopeless speculators<sup>29</sup> have terrorized the simple investors, consumers, and especially the young people.

The European Commissioner said that the inflation for the first quarter of 2008 is 3.6% in EU and 3.4% in EMU.<sup>30</sup> Europe, after its integration, faces the worst social problems since the Roman Empire;<sup>31</sup> crime, corruption, human trafficking, drugs, illegal migration, food scandals, and many others. Are these the benefits of destroying the sovereign nations or not? The consumption of oil is increasing for the most countries since 2000, except for the U.S. and the South Korea, which have a very small reduction. The biggest consumer of oil per person is Saudi Arabia and then the U.S.<sup>32</sup> We need to use other oil substitutes for our energy. Unfortunately, service-sector activity, which is very vulnerable to business cycles, fell in January 2008 to its lowest level since the 2001 recession. In Europe, a similar indicator fell to a four-year low. Then, concerns about a recession have increased.

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. Krugman (1983) suggests that an oil shock affects all countries, and its exchange rate effects must arise from asymmetries between countries. Brock, Durlauf, and West (2003) describe some approaches to macroeconomic policy evaluation, in the presence of uncertainty, regarding 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. Galbraith and Garcilazo (2004) suggest that income convergence in EU would help the poorer regions and that policies explicitly targeted to achieve regional income convergence will reduce the divergence in unemployment rates among member-nations and regions. Stewart (2005) found that GDP per capita is not a good proxy for wider regional well-being within a country. Bender, Neumann, and Skatun (2006) showed that the loss arising from unemployment is low across time and countries and that the unemployment rate is often a weak proxy for comparing labor market inefficiency. Chambers (2007) says that investment banks with this continuing globalization

face challenges and uncertainty that will dictate their success or failure. Pissarides (2007) showed that the very low unemployment in Europe in the 1960s was due to high productivity growth. 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. Kumar (2007) says that the globalization's business-cycle links include many crosscurrents, creating uncertainty about how overseas events might impact the Texas economy. 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.

In May of 2008, the U.S. consumer confidence index fell to 57.2, the lowest level since Richard Nixon presidency.<sup>33</sup> The Euro-zone inflation rose sharply to 3.5% in March 2008. Then, it would be difficult for the ECB to cut interest rate.<sup>34</sup> The Labor Department said that the unemployment rate rose to 5.1%. Martin Feldstein who heads the research group that determines when begin, said in March 2008 that a contraction had begun.<sup>35</sup> The federal deficit hit a record \$311 billion for the first quarter of 2008, as corporate-income-tax revenue fell.<sup>36</sup> Data showed that the U.K. economy grew 0.4% in the first quarter of 2008, the weakest rate in three years.<sup>37</sup>

Finance ministers met on April 12-13, 2008 at the annual meeting of IMF and World Bank and discussed the global financial crisis and the global food shortages. Surging commodity prices have pushed up global food prices 83% in the past three years, putting huge stress on the world's poorest nations. Rioting in response to soaring food prices has broken out in Egypt, Cameroon, Ivory Coast, Senegal, Ethiopia, and Haiti. In Pakistan and Thailand, army troops have been deployed to deter food theft from fields and warehouses. Pushing corn-based ethanol and other biofuels are deepening the crisis.<sup>38</sup> A little later, Energy Secretary Bodman said that the U.S. should begin moving away from corn-based ethanol as a biofuel.<sup>39</sup> This innovation of biofuels will cause serious disequilibria in our commodity markets and will increase the food prices, which will be disastrous for consumers. Saudi Arabia is reluctant to develop new oil projects, which will contribute to the high oil prices.<sup>40</sup>

Finally, our current problem, which is worsening continuously, is a global uncertainty that affects negatively individuals and by being in a pessimistic mood (because of lack of faith),<sup>41</sup> they act inconsiderable and mistaken, so they do not maximize their personal utility<sup>42</sup> and affect negatively the social welfare of their nation, and disturb even more the international turbulent situation. This accumulated uncertainty, which is magnified by the media to attract more viewers and increase their proceeds from advertising, affect our decisions as consumers, investors, and rational human beings. Then, we affect the growth of our economy, we reduce our productivity, we cause unemployment, we stopped saving, we gape on the foreign products (because of their good marketing), we have created tremendous inefficiencies, deficits, debts, and complex financial products,<sup>43</sup> which have affect the financial markets, institutions, interest rates, and exchange rate. Strong economies of the past are losing their competitiveness, some because they made the mistake to integrate a large number of dissimilar economies and force them to become alike; and others because they do not know history and have the illusion that a value neutral society could continue for ever to exist and prosper. Many are blaming Alan Greenspan (Fed) for the recent crises in the U.S. economy. For example, the stock market crash of 1987, the Savings & Loan crisis,

the Asian crisis, the collapse of Long Term Capital Management, the stock market bubble of 2000, the feared Y2K crisis, and currently the housing crisis.<sup>44</sup> Even the IMF urged members to make plans to increase spending to stimulate economic growth and rescue troubled institutions if global conditions worsen.<sup>45</sup> It seems that there is a big bubble in commodities (oil reached \$133.58 per barrel on May 22, 2008; gold arrived at \$1,007.10 per ounce on March 18, 2008, wheat prices increased by 500%, etc.), which is not fundamentally justified. Hopefully, this commodities bubble will be burst, soon.<sup>46</sup> U.N. officials blamed market speculation for the recent jump in global food prices.<sup>47</sup> But, corn prices are forecast to stay at record levels into 2009, due to a shrinking in U.S. corn crop and rising demand for it by the ethanol industry.<sup>48</sup>

Unfortunately, the world oil market faced a major supply disruption as Nigerian and U.K. labor disputes halted 2.5% of global output.<sup>49</sup> On April 30, 2008, the FOMC cut the federal fund rate by 25 basis points to 2% (the seventh cut in eight months). The U.S. continues its rhetoric against Iran, Syria, and North Korea. Iran's support for insurgents in Iraq is increasing, the Joint Chiefs chairman said. He warned that the U.S. military has the power to strike Iran if given the order. Syria's envoy to the U.S. said the CIA fabricated photos allegedly taken inside a secret Syrian nuclear reactor.<sup>50</sup> U.S. is giving some fiscal stimulus to help the economy. The Internal Revenue Service started making the deposits on Monday April 28, 2008 and will be \$168 billion, which will help consumption and will be used to pay down debts.<sup>51</sup> The financial (stock) markets in EU and the U.S. and many others around the world have experienced losses during the first four months of 2008, except a few ones in South and North America.<sup>52</sup> The U.S. productivity rose at a 2.2% annual rate in the first quarter of 2008, a sign that companies were cutting back on workers and hours worked.<sup>53</sup> The ECB and the Bank of England kept main interest rates unchanged (4% and 5%) to fight inflation.<sup>54</sup> The IMF urged the central banks of developing nations to raise rates to fight inflation, too.<sup>55</sup>

Our hypothesis is that uncertainty causes unemployment in Europe and overvaluation of the euro. This uncertainty (risk) causes an increase in U.S. debts, reduction in consumption, and undervaluation of the U.S. dollar. But, even with this undervalued dollar, the U.S. has lost its competitiveness with the rest of the world. The paper proceeds as follows. Section II describes the theoretical model and gives the methodology used for determining the variables in question. Section III produces the estimation of the model and gives the main empirical results. Section IV provides some public policy implications of the current problems. Finally, section V presents the epilogue of this analysis.

## II. THE MACRO-THEORETICAL MODEL

The objective, here, is to determine the variables (factors), which affect our well-being (income, prices, employment, etc.) in our societies. Agents are assumed to know the first and second moments of all probability distributions. This gives them the information needed to form linear least squares projections<sup>56</sup> of random variables they do not know on the random variables they do know. An augmented of Kallianiotis (2008b) model that can be used to satisfy the predictions of the current distressful variables can be written as follows,

$$p_{oil_t} - p_{oil_t}^e \quad (1)$$

where,  $Y_t$  = real output, unemployment, price level, savings rate, national debt, trade deficit, interest rates, financial market indexes (i.e., DJIA), and exchange rate,  $Y_t^E$  = the equilibrium or natural<sup>57</sup> level of the variable,  $X_t$  = an aggregate demand variable, i.e., money growth, inflation, nominal GNP growth, taxes, consumption, government spending, investment, exports, imports, etc., and some exogenous factors like, price of oil ( $p_{oil_t}$ ), federal funds rate (policy instrument,  $i_{FF_t}$ ), and risk (= gold prices,  $p_{Gold_t}$ ),  $X_t^e$  = the anticipated  $X_t$  conditional on information available at  $t-1$ ,  $\beta_i, \zeta_i, \theta_i$  and  $\eta_i$  = coefficients, and  $\varepsilon_t$  = the error term.

We assume neutrality, here, as Mishkin (1983) did; that only unanticipated and not anticipated countercyclical policy will have an effect on business cycle fluctuations. Then, this work presents a policy ineffectiveness process. Also, external shocks and uncertainty are affecting the economy. Kallianiotis (2007b) gives an extensive literature review in this area of macro-modeling. The above eq. (1) can be expanded to incorporate the differential effects of unanticipated and anticipated movements in explanatory variables.

$$Y_t = Y_t^E + \sum_{i=0}^n \beta_i (X_{t-i} - X_{t-i}^e) + \sum_{i=0}^n \zeta_i (p_{oil_{t-i}} - p_{oil_{t-i}}^e) + \sum_{i=0}^n \theta_i (i_{FF_{t-i}} - i_{FF_{t-i}}^e) + \sum_{i=0}^n \eta_i (p_{Gold_{t-i}} - p_{Gold_{t-i}}^e) + \sum_{i=0}^n \gamma_i X_{t-i}^e + \sum_{i=0}^n \kappa_i p_{oil_{t-i}}^e + \sum_{i=0}^n \mu_i i_{FF_{t-i}}^e + \sum_{i=0}^n \nu_i p_{Gold_{t-i}}^e + \varepsilon_t \quad (2)$$

Rational expectations imply that the anticipations of  $X_t$  will be found optimally, using all available information ( $I_{t-1}$ ), but this information is incomplete and causes serious problems to our economy and to our society, in general. The full information ( $\Pi_{t-1}$ ) is unknown to the majority of the people and especially to the market makers. Also, forecasting models are assumed to be linear.

A forecasting equation that can be used to generate these anticipations is:

$$X_t = \delta F_{t-1} + \varepsilon_t \quad (3)$$

where,  $F_{t-1}$  = a vector of variables used to forecast  $X_t, p_{oil_t}, i_{FF_t}$ , and  $p_{Gold_t}$ ,<sup>58</sup>  $\delta$  = a vector of coefficients ( $\delta_1, \delta_2, \delta_3$ , and  $\delta_4$ ), and  $\varepsilon_t$  = an error term [ $E(\varepsilon_t) = 0, E(\varepsilon_t^2) = \sigma^2$ , and  $E(\varepsilon_t, \varepsilon_{t-1}) = 0$ ].

An optimal forecast for  $X_t$  involves taking expectations of eq. (3) conditional on information available at  $t-1$ :

$$X_t^e = E(X_t / I_{t-1}) \quad (4)$$

Hence,

$$X_t^e = \delta F_{t-1} \quad (5)$$

Substituting eq. (5) into eq. (2), we have:

$$Y_t = Y_t^E + \sum_{i=0}^n \beta_i (X_{t-i} - \delta_1 F_{t-1-i}) + \sum_{i=0}^n \zeta_i (p_{oil_{t-i}} - \delta_2 F_{t-1-i}) + \sum_{i=0}^n \theta_i (i_{FF_{t-i}} - \delta_3 F_{t-1-i}) + \sum_{i=0}^n \eta_i (p_{Gold_{t-i}} - \delta_4 F_{t-1-i}) + \sum_{i=0}^n \gamma_i \delta_1 F_{t-1-i} + \sum_{i=0}^n \kappa_i \delta_2 F_{t-1-i}$$

$$+ \sum_{i=0}^n \mu_i \delta_3 F_{t-1-i} + \sum_{i=0}^n \nu_i \delta_4 F_{t-1-i} + \varepsilon_t \quad (6)$$

The assumption is here, that all the right-hand-side variables are exogenous and are uncorrelated with the error term [ $E(\varepsilon_t, F_t) = 0$ ]. We have to estimate eq. (3) or eq. (3') and substitute its volume to eq. (6), which will be used for the estimation of  $Y_t$ . The specification of  $Y_t^E$  can be as following:<sup>59</sup>

$$Y_t^E = \sum_{i=1}^L \lambda_i Y_{t-i} \quad (7)$$

The theory, here, implies that  $X_t^e$  is a suboptimal, one-period-ahead forecast, conditional on available information ( $I_{t-1}$ ). The optimal forecast can be accomplished only if full information ( $\Pi_{t-1}$ ) is available.<sup>60</sup> An appropriate forecasting equation for  $X_t$  should rely on lagged explanatory variables. Economic theory may not be very valuable in generating accurate models because some information is excluded. Then, an atheoretical statistical procedure may be superior to economic theory for deciding on the forecasting equation's specification. We can use two procedures to specify the forecasting equations. First, a univariate time-series model of the autoregressive type [ $AR(p)$ ]<sup>61</sup> or an autoregressive-moving average model [ $ARMA(p, q)$ ] can be used if the forecasting is improved.<sup>62</sup> Second, a multivariate forecasting model will be better for our work. A Granger<sup>63</sup> causality test between  $F$  and  $X$  ( $F \Rightarrow X$ ) can be used to determine if  $F$  is needed to forecast  $X$ .

Finally, with a Granger causality test, the independent variables ( $X$ s), which cause our objective variables ( $Y$ s) can be tested and a multivariate regression could be run as follows, due to interdependence between the U.S. and the European economy:

$$Y_t = \kappa + \sum_{i=0}^n \tau_i X_{t-i} + \sum_{i=0}^n \xi_i X_{t-i}^* + \varepsilon_t \quad (8)$$

where,  $\kappa$  = the constant term,  $\tau_i$  = and  $\xi_i$  = coefficients, and  $X_t^*$  = the foreign variables.

The most emphasis will be give on the domestic ( $X_t$ ) and foreign ( $X_t^*$ ) factors, which have caused the spot exchange rate ( $S_t$ ) to be so enigmatic the last five years. Then, the dependent variable ( $Y_t$ ) will also be the exchange rate between the dollar and euro.

### III. ESTIMATION OF THE MODEL AND EMPIRICAL RESULTS

The data, taken from *economagic.com*, *imfstatistics.org*, and *Eurostat* are monthly from 1999:01 to 2007:12. They comprise spot exchange rate ( $S$ ), money supply ( $M2$ ), consumer price index ( $CPI$ ), federal funds rate ( $i_{FF}$ ), 3-month T-bill rate ( $i_{RF}$ ), ECB overnight rate ( $i_{OND}$ ), 3-month deposit rate ( $LIBOR$ ) ( $i_{3mdl}$ ), government bonds rate ( $i_{GB}$ ), corporate bond rates ( $i_{AAA}$ ) and ( $i_{BAA}$ ), nominal ( $Y$ ) and real  $GDP$  ( $Q$ ), private consumption ( $C$ ), private investment ( $I$ ), real risk-free rate of interest ( $r^*$ ), risk premium ( $d = i_{GB} - i_{3MTB}$  or  $d = P_{Gold}$ ),<sup>64</sup> 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. and similar data for the EMU.

We started with the macro-variables statistics ( $\bar{X}$  and  $\sigma_{\bar{X}}$ ) from 1999:01 to 2007:12 in both economies (U.S. and Euro-zone). The U.S. economy is doing much better than the EU

one, i.e.,  $y^* = 5.03\% > \hat{y}^* = 3.89\%$ ,  $\pi = 2.74\% < \pi^* = 3.07\%$ ,  $u = 4.97\% < u^* = 8.60\%$ ,  $i_{FF} = 3.58\% > i_{OND}^* = 3.27\%$ ,  $\dot{c} = 5.54\% > \dot{c}^* = 3.74\%$ , and  $i = 3.33\% > i^* = 3.27\%$ .

Then, the correlation coefficients between all these variables are determined. The results show a negative correlation between price of oil and saving, a positive between price of oil and inflation, national debt, government spending, and spot exchange rate ( $\rho_{p_{Gold}, S} = +0.82$ ). Also, we can see the tremendous interdependence between the two economies, too ( $\rho_{Y, Y^*} = +0.98$ ).<sup>65</sup> Table 1 supplies Granger (1969) causality tests and correlation coefficients between the variables affecting the exchange rate. The government expenditures, the price of gold, the consumption, the price level, and the money supply, all cause depreciation of the dollar. Of course, causality tests have been made for all the macro-variables and are available from the author. Between 1999:01 and 2007:12, the variables that caused changes in exchange rate, in the U.S., were inflation, income, national debt, government spending, DJIA, price of gold, money supply, and consumption. In the EU, there were income, prices, unemployment rate, and consumption. The EU unemployment is caused by exports, imports, interest rates, price of oil, and price of gold. American competitiveness (CAD) is caused by income, prices, national debt, taxes, government spending, money market rates ( $i_{FF}$  and  $i_{RF}$ ), corporate bond rates ( $i_{AAA}$  and  $i_{BAA}$ ), and the spot exchange rate; also, by unemployment in EU, interest rates there, and European money supply.

**Table 1**  
Pairwise Granger Causality Tests and Correlation Coefficients ( $x_t \Rightarrow s_t$  and  $\rho_{s,x}$ )

	$g_t \Rightarrow s_t$	$p_{Gold_t} \Rightarrow s_t$	$p_{oil_t} \Rightarrow s_t$	$c_t \Rightarrow s_t$	$p_t^* \Rightarrow s_t$	$m_t^* \Rightarrow s_t$
	$s_t \Rightarrow g_t$	$s_t \Rightarrow p_{Gold_t}$	$s_t \Rightarrow p_{oil_t}$	$s_t \Rightarrow c_t$	$s_t \Rightarrow p_t^*$	$s_t \Rightarrow m_t^*$
F-Stat	5.383**	8.980**	1.614	4.625**	5.071**	4.957**
Lags: 2	0.665	0.065	7.485**	4.367**	0.469	0.086
F-Stat	3.479**	7.065**	0.954	2.911**	3.723**	3.082**
Lags: 3	1.122	0.448	4.145**	8.012**	0.658	0.124
F-Stat	1.720	3.278**	0.824	2.265*	2.117*	2.679**
Lags: 6	0.675	0.566	1.923*	5.745**	1.092	0.491
$\rho_{s,x}$	+0.791	+0.830	+0.706	+0.777	+0.755	+0.804

Note: Y = income, S=spot exchange rate, P = price level (CPI), X = exports, M = imports, u = unemployment rate, psr = personal saving rate, ND = national debt, C = consumption, I = investment, G = government spending, T = taxes, M2 = money supply,  $i_{FF}$  = federal funds rate,  $i_{TB}$  = 3-month Treasury Bill rate,  $i_{GB}$  = government bonds rate,  $i_{AAA}$  = AAA corporate bond rate,  $i_{BAA}$  = BAA corporate bond rate, DJIA = Dow Jones Industrial Average index,  $P_{oil}$  = price of oil,  $P_{Gold}$  = price of gold,  $\bar{X}$  = the mean value of the variable X,  $\sigma_X$  = the standard deviation of X,  $\bar{x}$  = the mean value of the  $\ln X$ ,  $\sigma_x$  = the standard deviation of the  $\ln X$ ,  $\dot{x}$  = the growth of X,  $\sigma_{\dot{x}}$  = the standard deviation of the growth of X,  $i_{OND}$  = overnight deposit rate,  $i_{3MDL}$  = 3-month deposit rate (LIBOR), an (\*) denotes the foreign country (Euro-zone);  $X \Rightarrow Y = X$  Granger causes Y (it measures precedence and information content) and F-statistics = test of null hypothesis of the causality with \*\*\* = 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.

Next, an augmented Dickey-Fuller (1979) unit root test (Tables 2a and 2b) for all our variables takes place and the only stationary ones are, the  $u_t$ ,  $i_{FF_t}$ , and  $i_{FF_t}^e$ . The rest of the variables contain a unit root [I(1)]. Also, Johansen (1991, 1995) cointegration tests for eqs. (8), (1), and (2) are performed and the results show that cointegration exists among these variables; equations are stationary. Table 3 presents only the results of cointegration for eq.

**Table 2a**  
Augmented Dickey-Fuller Unit Root Tests for the U.S. Variables

Variables in Levels [ $y_t$ ]	ADF	I(d)	Variables in 1 <sup>st</sup> differences [ $\Delta(y_t)$ ]	ADF	I(d)
$q_t$	1.536	I(1)	$\Delta(q_t)$	7.859***	I(1)
$q_t^e$	1.122	I(1)	$\Delta(q_t^e)$	5.299***	I(1)
$p_t$	0.193	I(1)	$\Delta(p_t)$	3.065**	I(1)
$p_t^e$	1.008	I(1)	$\Delta(p_t^e)$	10.265***	I(1)
$u_t$	3.428***	I(0)	$\Delta(u_t)$	8.719***	I(1)
$u_t^e$	1.438	I(1)	$\Delta(u_t^e)$	16.272***	I(1)
$m_t^s$	2.005	I(1)	$\Delta(m_t^s)$	4.123***	I(1)
$m_t^{se}$	2.030	I(1)	$\Delta(m_t^{se})$	3.843***	I(1)
$p_{oil_t}$	0.034	I(1)	$\Delta(p_{oil_t})$	22.064***	I(1)
$p_{oil_t}^e$	0.066	I(1)	$\Delta(p_{oil_t}^e)$	26.781***	I(1)
$i_{FF_t}$	2.702 <sup>*</sup>	I(0)	$\Delta(i_{FF_t})$	6.352***	I(1)
$i_{FF_t}^e$	2.819 <sup>*</sup>	I(0)	$\Delta(i_{FF_t}^e)$	23.449***	I(1)
$p_{Gold_t}$	0.879	I(1)	$\Delta(p_{Gold_t})$	12.310***	I(1)
$p_{Gold_t}^e$	0.858	I(1)	$\Delta(p_{Gold_t}^e)$	13.307***	I(1)
$psr_t$	0.569	I(1)	$\Delta(psr_t)$	21.501***	I(1)
$nd_t$	0.177	I(1)	$\Delta(nd_t)$	3.675***	I(1)
$t_t$	0.755	I(1)	$\Delta(t_t)$	10.054***	I(1)
$g_t$	1.216	I(1)	$\Delta(g_t)$	5.495***	I(1)
$x_t$	0.669	I(1)	$\Delta(x_t)$	6.753***	I(1)
$m_t$	0.826	I(1)	$\Delta(m_t)$	10.485***	I(1)
$i_{RF_t}$	2.501	I(1)	$\Delta(i_{RF_t})$	6.763***	I(1)
$i_{20GB_t}$	1.521	I(1)	$\Delta(i_{20GB_t})$	18.536***	I(1)
$i_{AAA_t}$	1.595	I(1)	$\Delta(i_{AAA_t})$	19.069***	I(1)
$i_{BAA_t}$	1.565	I(1)	$\Delta(i_{BAA_t})$	16.069***	I(1)
$djia_t$	0.196	I(1)	$\Delta(djia_t)$	26.034***	I(1)
$c_t$	0.234	I(1)	$\Delta(c_t)$	4.991***	I(1)
$i_t$	0.646	I(1)	$\Delta(i_t)$	21.853***	I(1)
$s_t$	0.547	I(1)	$\Delta(s_t)$	7.276***	I(1)

Note: See Table 1. ADF= Augmented Dickey-Fuller test statistic, I(d) = series contains d unit roots and is of integrated order d,  $x=\ln X$ , \*\*\* = significant at the 1% level, \*\*= significant at the 5% level, and \* = significant at the 10% level.

Source: See Table 1.



**Table 2b**  
**Augmented Dickey-Fuller Unit Root Tests for the EU Variables**

Variables in Levels [ $y_t$ ]	ADF	I(d)	Variables in 1 <sup>st</sup> differences [ $\Delta(y_t)$ ]	ADF	I(d)
$q_t^*$	0.934	I(1)	$\Delta(q_t^*)$	4.759***	I(1)
$q_t^{*e}$	0.808	I(1)	$\Delta(q_t^{*e})$	4.340***	I(1)
$m_t^{s*}$	2.409	I(1)	$\Delta(m_t^{s*})$	1.227	I(1)
			$\Delta(m_t^{s*}, 2)$	17.372**	I(2)
$m_t^{s*e}$	2.565	I(1)	$\Delta(m_t^{s*e})$	1.675	I(1)
			$\Delta(m_t^{s*e}, 2)$	15.709**	I(2)
$I_{OND,t}^*$	2.349	I(1)	$\Delta(I_{OND,t}^*)$	7.830***	I(1)
$I_{OND,t}^{*e}$	1.996	I(1)	$\Delta(I_{OND,t}^{*e})$	7.449***	I(1)
$p_t^*$	0.517	I(1)	$\Delta(p_t^*)$	1.525	I(1)
			$\Delta(p_t^*, 2)$	9.055***	I(2)
$p_t^{*e}$	0.522	I(1)	$\Delta(p_t^{*e})$	1.714	I(1)
			$\Delta(p_t^{*e}, 2)$	8.830***	I(2)
$u_t^*$	1.272	I(1)	$\Delta(u_t^*)$	4.069***	I(1)
$u_t^{*e}$	1.163	I(1)	$\Delta(u_t^{*e})$	3.807***	I(1)
$x_t^*$	0.457	I(1)	$\Delta(x_t^*)$	10.952***	I(1)
$m_t^*$	0.390	I(1)	$\Delta(m_t^*)$	10.776***	I(1)
$i_{3MDL,t}^*$	1.380	I(1)	$\Delta(i_{3MDL,t}^*)$	6.301***	I(1)
$i_{10GB,t}^{*e}$	0.505	I(1)	$\Delta(i_{10GB,t}^{*e})$	8.149***	I(1)
$c_t^*$	0.196	I(1)	$\Delta(c_t^*)$	4.113***	I(1)
$i_t^*$	0.493	I(1)	$\Delta(i_t^*)$	3.286**	I(1)

Note: See Table 1. ADF= Augmented Dickey-Fuller test statistic, I(d)=series contains d unit roots and is of integrated order d, x=ln X, \*\*\* = significant at the 1% level, \*\*= significant at the 5% level, and \* = significant at the 10% level.

Source: See Table 1.

**Table 3**  
**Cointegration Tests of the Multi-variables Models**

Eq. (8); Variables: $s_{it}, g_{it}, p_{Gold,t}, p_{oil,t}, c_{it}, p_t^*, m_t^{*e}$						
(Lags interval in first differences: 1 to 4)						
Null	Alternative	Trace Test			Maximum Eigenvalue Test	
		Eigenvalue	Statistics	Critical Value 95%	Statistics	Critical Value 95%
$r = 0$	$r > 0$	0.3473	147.3369***	125.6154	42.6574	46.2314
$r \leq 1$	$r > 1$	0.2960	104.6796***	95.7537	35.0975	40.0776
$r \leq 2$	$r > 2$	0.2335	69.5820**	47.8561	26.5891	33.8769
$r \leq 3$	$r > 3$	0.2177	42.9930	47.8561	24.5569	27.5843
$r \leq 4$	$r > 4$	0.1116	18.4361	29.7971	11.8339	21.1316
$r \leq 5$	$r > 5$	0.0634	6.6022	15.4947	6.5474	14.2646
$r \leq 6$	$r > 6$	0.0005	0.0548	3.8415	0.0548	3.8415

Note: See, table 1; Trace test indicates 2 cointegrating equations at the 5% level. Maximum eigenvalue test indicates no cointegration at the 5% level.

Source: See, table 1.

(8) of exchange rate determination. Table 4 presents the Least Squares Estimates of eq. (8), factors affecting the exchange rate. The rest of the variables in questions have been tested and the tables are omitted, due to space limitation. The results show that real income ( $q$ ) is affected by national debt ( $nd_{t-1}$ ), AAA corporate bond rate ( $i_{AAA_t}$ ), BAA corporate bond rate ( $i_{BAA_t}$ ), and money supply ( $m2_t$ ). The rest of the objective variables ( $y, p, u, psr, nd, ca, i_{TB}, i_{GB}$ ,

**Table 4**  
**Factors Affecting the Exchange Rate**

Variables	s	s	s	s
$\kappa$	1.213 (1.706)	-	0.658 (0.987)	-
$y_t$	-0.305 (0.673)	-	-	-
$p_t$	-1.125** (0.565)	-0.454 (0.340)	$p_{t-1}$ -0.424 (0.469)	-
$nd_t$	0.383* (0.227)	0.267* (0.147)	$nd_{t-1}$ 0.160 (0.161)	-
$g_t$	-0.859* (0.459)	-0.858*** (0.299)	$g_{t-1}$ -0.714** (0.329)	-0.776*** (0.290)
$djia_t$	0.008 (0.053)	-	-	-
$p_{Gold_t}$	0.062 (0.043)	0.053 (0.036)	0.057 (0.037)	0.067* (0.036)
$p_{oil_t}$	0.066*** (0.025)	0.043*** (0.017)	0.049** (0.018)	0.041*** (0.016)
$m_t^s$	0.088 (0.313)	-	-	-
$c_t$	-0.696 (0.629)	-0.593* (0.314)	$c_{t-1}$ -0.748** (0.324)	-0.573*** (0.141)
$y_t^*$	-0.055 (0.591)	-	-	-
$p_t^*$	1.449* (0.811)	1.494*** (0.348)	$p_{t-1}^*$ 1.426*** (0.357)	1.278*** (0.320)
$m_t^{s*}$	0.432 (0.366)	0.517** (0.215)	$m_{t-1}^*$ 0.597*** (0.217)	0.531*** (0.209)
$c_t^*$	0.776 (0.726)	-	-	-
$s_{t-1}$	0.866*** (0.060)	0.853*** (0.045)	0.857*** (0.047)	0.909*** (0.026)
$R^2$	0.979	0.981	0.981	0.981
SSR	0.039	0.043	0.044	0.045
D-W	1.706	1.683	1.575	1.615
F	263.234	-	558.154	-
N	95	104	105	105

Note: See, Table 1. \*\*\* = significant at the 1% level, \*\* = significant at the 5% level, and \* = significant at the 10% level.

Source: See, Table 1.

$i_{AAA}$ ,  $i_{BAA}$ ,  $d$ ,  $j$ ,  $a$ ,  $s$ ,  $c$ , and  $i$ ) are affected by different variables. The income ( $y$ ) is affected by  $y_t$ ,  $p_t$ ,  $nd_t$ ,  $p_{oil_t}$ ,  $p_{Gold_t}$  and  $c_t$ . The price ( $p$ ) is affected by  $m_t^*$ ,  $m2_t$  and  $c_t$ . The unemployment rate ( $u$ ) is affected by taxes ( $t$ ),  $p_{oil_t}$ ,  $p_{Gold_t}$ ,  $x_t$ , investment ( $i_t$ ),  $i_{OND_t}^*$  and  $i_{3MDL_t}^*$ . The spot rate ( $s$ ) is affected by  $m_t^*$ .

Tables 5a and 5b present the results of eq. (1). Real income ( $q$ ) is affected by the unanticipated price of oil ( $p_{oil_t} - p_{oil_t}^e$ ) and by the equilibrium level of the variable in question. Prices ( $p$ ) are affected by unanticipated money supply and price of oil and by the equilibrium

**Table 5a**  
Unanticipated Effect of Explanatory Variables [eq. (1)]

Variables	$q_t$	$p_t$	$u_t$
$q_t^e$	1.000*** (0.001)	$p_t^e$ 0.999*** (0.001)	$u_t^e$ 0.997*** (0.002)
$m_t - m_t^e$	-0.031 (0.061)	0.040 (0.040)	1.830 (2.280)
$m_{t-1} - m_{t-1}^e$	-0.030 (0.061)	0.048 (0.041)	3.891* (2.341)
$m_{t-2} - m_{t-2}^e$	- (0.061)	0.095** (0.040)	-0.541 (2.326)
$p_{oil_t} - p_{oil_t}^e$	-0.012*** (0.004)	0.013*** (0.003)	-0.195 (0.150)
$p_{oil_{t-1}} - p_{oil_{t-1}}^e$	-0.011*** (0.004)	0.015*** (0.003)	0.078 (0.149)
$p_{oil_{t-2}} - p_{oil_{t-2}}^e$	-0.009** (0.004)	-0.001 (0.003)	0.047 (0.149)
$p_{oil_{t-3}} - p_{oil_{t-3}}^e$	0.004 (0.004)	-	-
$i_{FF_t} - i_{FF_t}^e$	-	0.001 (0.001)	0.076 (0.066)
$i_{FF_{t-1}} - i_{FF_{t-1}}^e$	-0.001 (0.002)	0.001 (0.001)	-0.108* (0.064)
$p_{Gold_{t-1}} - p_{Gold_{t-1}}^e$	-0.007 (0.07)	0.001 (0.005)	0.245 (0.261)
$p_{Gold_t} - p_{Gold_t}^e$	-	-0.001 (0.005)	0.048 (0.263)
$R^2$	0.998	0.999	0.955
SSR	0.002	0.001	2.653
D-W	1.839	1.712	2.412
F	-	-	-
N	152	154	154

Note: See, Table 1. \*\*\* = significant at the 1% level, \*\* = significant at the 5% level, and \* = significant at the 10% level.

Source: See, Table 1.

**Table 5b**  
**Unanticipated Effect of Explanatory Variables [eq. (1)]**

Variables	$q_t^*$	$p_t^*$	$u_t^*$
$q_t^{*e}$	1.000*** (0.001)	$p_t^{*e}$ 0.999*** (0.001)	$u_t^{*e}$ 0.999*** (0.001)
$m_t^* - m_t^{*e}$	0.009 (0.009)	-0.040*** (0.013)	-0.329 (0.204)
$m_{oil,t-1}^* - m_{oil,t-1}^{*e}$	0.069*** (0.008)	0.107*** (0.012)	0.256 (0.182)
$p_{oil,t} - p_{oil,t}^e$	-0.001 (0.001)	-0.001 (0.001)	0.024 (0.016)
$p_{oil,t-1} - p_{oil,t-1}^e$	0.001 (0.001)	0.001 (0.001)	0.012 (0.017)
$i_{OND,t}^* - i_{OND,t}^{*e}$	-0.001 (0.001)	-0.001 (0.001)	0.009 (0.009)
$i_{OND,t-1}^* - i_{OND,t-1}^{*e}$	0.001 (0.001)	-0.001 (0.001)	0.004 (0.009)
$p_{Gold,t} - p_{Gold,t}^e$	0.001 (0.001)	-0.001 (0.001)	-0.057** (0.025)
$p_{Gold,t-1} - p_{Gold,t-1}^e$	-0.001 (0.001)	-0.004** (0.002)	-0.019 (0.028)
$R^2$	0.999	0.999	0.999
$SSR$	0.001	0.001	0.008
$D-W$	3.226	1.856	2.687
$F$	-	-	-
$N$	115	115	79

Note: See, Table 1a. \*\*\* = significant at the 1% level, \*\* = significant at the 5% level, and \* = significant at the 10% level.

Source: See, Table 1a.

price. Finally, unemployment rate ( $u$ ) is affected by unanticipated money supply and federal funds rate and by the natural level of unemployment. Table 5b shows that  $q^*$  is affected by unanticipated money supply and by the equilibrium real output. The price level ( $p^*$ ) is affected by the equilibrium price and the unanticipated money supply and price of gold (risk). The unemployment rate ( $u^*$ ) is affected by the equilibrium unemployment rate and the unanticipated price of gold. Tables 6a and 6b give the estimation of eq. (2). The three objective variables, which alter our well-being, in the U.S. ( $q_t$ ,  $p_t$ , and  $u_t$ ) are affected by their equilibrium levels, their unanticipated money supply, prices of oil and gold, and federal funds rate and anticipated prices of oil and gold, and federal funds rate. The  $q^*$  is affected by the equilibrium output, the unanticipated money supply and price of gold (risk), and the anticipated price of gold in Europe. The same holds for prices ( $p^*$ ), which are affected by unanticipated money supply. The unemployment rate ( $u^*$ ) in EMU is affected by the equilibrium unemployment and the unanticipated price of gold. Finally, by using a Hodrick-Prescott (1997) filter, we determined the long-term trend of the exchange rate (\$/euro), as Graph 1 presents. The trend is positive, which reveals the continuous depreciation of the U.S. dollar.

**Table 6a**  
**Unanticipated and Anticipated Effects of Explanatory Variables [eq. (2)]**

Variables	$q_t$	$p_t$	$u_t$
$q_t^e$	1.000*** (0.001)	$p_t^e$ 0.992*** (0.002)	$u_t^e$ 0.997*** (0.001)
$m_t - m_t^e$	0.146** (0.074)	0.006 (0.009)	2.139** (0.065)
$m_{t-1} - m_{t-1}^e$	0.035 (0.043)	0.006 (0.031)	4.034*** (0.226)
$p_{oil_t} - p_{oil_t}^e$	0.012*** (0.001)	0.012*** (0.001)	-0.182*** (0.005)
$p_{oil_{t-1}} - m_{oil_{t-1}}^e$	0.030*** (0.009)	0.010* (0.006)	0.186*** (0.045)
$i_{FF_t} - i_{FF_t}^e$	0.001 (0.001)	0.001 (0.001)	0.081*** (0.002)
$i_{FF_{t-1}} - i_{FF_{t-1}}^e$	-0.002 (0.001)	0.002** (0.001)	-0.118*** (0.007)
$p_{Gold_t} - p_{Gold_t}^e$	0.004*** (0.002)	0.003*** (0.001)	0.217*** (0.008)
$p_{Gold_{t-1}} - p_{Gold_{t-1}}^e$	0.011* (0.006)	-0.003 (0.004)	0.048 (0.030)
$m_t^e$	-0.003 (0.030)	0.001 (0.022)	-0.007 (0.160)
$m_{t-1}^e$	0.002 (0.030)	0.004 (0.022)	0.007 (0.160)
$p_{oil_t}^e$	-0.017** (0.007)	0.004 (0.005)	-0.095** (0.037)
$p_{oil_{t-1}}^e$	0.017** (0.007)	-0.005 (0.005)	0.097*** (0.037)
$i_{FF_t}^e$	0.001 (0.001)	-0.001 (0.001)	0.004 (0.005)
$i_{FF_{t-1}}^e$	-0.001 (0.001)	0.001* (0.001)	-0.004 (0.005)
$p_{Gold_t}^e$	-0.010* (0.005)	0.002 (0.004)	-0.053* (0.028)
$p_{Gold_{t-1}}^e$	0.010* (0.005)	-0.003 (0.004)	0.052* (0.029)
$R^2$	0.999	0.999	0.999
SSR	0.001	0.001	0.002
D-W	2.630	1.209	1.996
F	-	-	-
N	151	154	154

Note: See, Table 1. \*\*\* =significant at the 1% level, \*\*= significant at the 5% level, and \* = significant at the 10% level.

Source: See, Table 1.

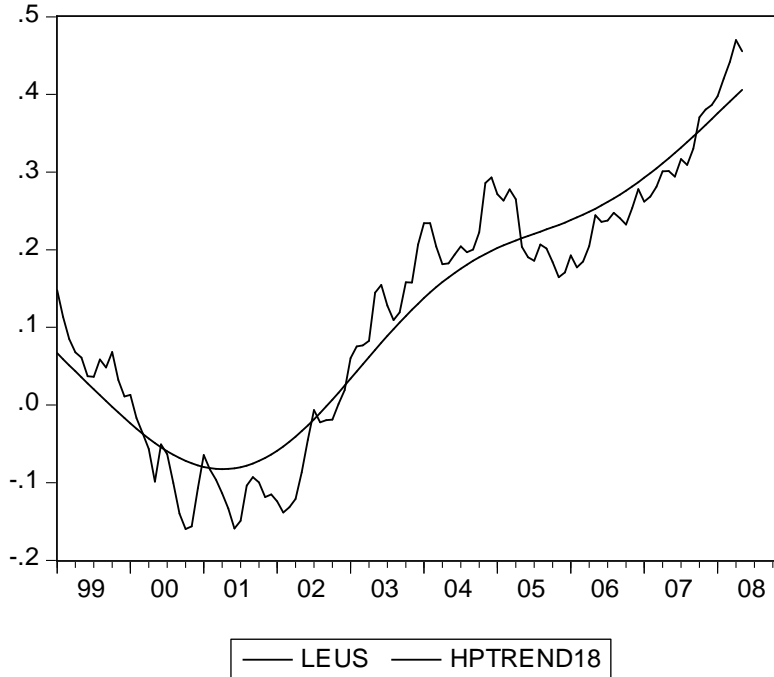
**Table 6b**  
**Unanticipated and Anticipated Effects of Explanatory Variables [eq. (2)]**

Variables	$q_t^*$	$p_t^*$	$u_t^*$
$q_t^{*e}$	1.000*** (0.001)	$q_t^{*e}$ 0.996*** (0.010)	$u_t^{*e}$ 0.998*** (0.007)
$m_t^* - m_t^{*e}$	0.009 (0.009)	-0.040*** (0.014)	-0.277 (0.225)
$m_{t-1}^* - m_{t-1}^{*e}$	0.066*** (0.011)	0.104*** (0.017)	-0.017 (1.117)
$p_{oil_t} - p_{oil_t}^e$	-0.001 (0.001)	-0.001 (0.001)	0.027 (0.019)
$p_{oil_{t-1}} - p_{oil_{t-1}}^e$	0.001 (0.006)	-0.001 (0.009)	-0.025 (0.171)
$i_{OND_t}^* - i_{OND_t}^{*e}$	0.001 (0.001)	0.001 (0.001)	0.008 (0.011)
$i_{OND_{t-1}}^* - i_{OND_{t-1}}^{*e}$	0.001 (0.001)	-0.001 (0.001)	0.017 (0.029)
$p_{Gold_t} - p_{Gold_t}^e$	0.001 (0.001)	-0.001 (0.002)	-0.067** (0.031)
$p_{Gold_{t-1}} - p_{Gold_{t-1}}^e$	0.015*** (0.004)	0.003 (0.006)	-0.088 (0.109)
$m_t^{*e}$	-0.001 (0.008)	0.001 (0.012)	0.340 (1.094)
$m_{t-1}^{*e}$	0.001 (0.008)	0.002 (0.012)	-0.321 (1.096)
$p_{oil_t}^e$	-0.001 (0.005)	0.002 (0.008)	0.035 (0.142)
$p_{oil_{t-1}}^e$	0.001 (0.005)	-0.002 (0.008)	-0.034 (0.141)
$i_{OND_t}^{*e}$	-0.001 (0.001)	-0.001 (0.001)	-0.011 (0.024)
$i_{OND_{t-1}}^{*e}$	0.001 (0.001)	0.001 (0.001)	0.008 (0.024)
$p_{Gold_t}^e$	-0.016*** (0.004)	-0.007 (0.006)	0.052 (0.108)
$p_{Gold_{t-1}}^e$	0.015*** (0.004)	0.007 (0.006)	-0.077 (0.102)
$R^2$	0.999	0.999	0.999
$SSR$	0.001	0.001	0.008
$D-W$	3.062	1.856	2.684
$F$	-	-	-
$N$	115	115	79

Note: See, Table 1. \*\*\* =significant at the 1% level, \*\* = significant at the 5% level, and \* = significant at the 10% level.

Source: See, Table 1.

Graph 1: Spot Exchange Rate (\$/euro) Hodrick-Prescott Long-Term Trend



**IV. SOME POLICY IMPLICATIONS**

Even though that the U.S. dollar has depreciated drastically since 2001 (i.e., -85.73% with respect to euro),<sup>66</sup> the current account deficits have assumed extraordinary proportions.<sup>67</sup> A current account deficit is matched by a capital account surplus. In other words, a country with a current account deficit surrenders claims on future income (physical assets, stocks, and bonds) to foreigners. The ongoing U.S. current account deficit translates into an average of billions of dollars in net capital imports per business day. That is, foreign investors have been accumulating U.S. assets at an unusually high rate. In the future, foreign investors might become more wary of holding increasingly larger portions of their wealth in U.S. assets.<sup>68</sup> In order to promote continued investment in the United States, U.S. assets would, then, have to become more attractive. One way of attracting foreign investments is to lower the price of the asset in foreign currency terms. A decline in the foreign exchange value (depreciation) of the dollar would do just that. Therefore, a large current account deficit might be expected to depress the value of the dollar over time (and it seems that this is the case now).<sup>69</sup>

Then, what is the remedy? at least for the U.S. because EMU and EU country-members are in big trouble and it seems that they do not realize their destruction. 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 reduce inflation, to

appreciate the dollar ( $S = 1 \frac{\$}{euro}$ ), to reduce demand for oil (alternative sources of energy),<sup>70</sup>

to stabilize the stock market (lower return and lower risk, too and to control a little the speculators), and to keep relatively low level for the target rate of monetary policy ( $i_{FF}$ ) and moderate rates for the entire economy. The U.S. needs to revise its 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)<sup>71</sup> and not "consumers" and "spendthrifts". To perfect our economy and our society, we need a perfect rule ("Golden Rule") and not the current exaggerations in all spectrums of life.

Even though that the return is lower in the U.S.,<sup>72</sup> investors invest here, because of the unparalleled efficiency, stability, transparency, certainty, and liquidity of the U.S. financial markets. Investors find that dollar-denominated claims are an attractive element of any international portfolio. This process of investors seeking the most beneficial combination of risk and return, rebalancing portfolios when opportunities arise, gives rise to a source of capital account dynamics that is unrelated in any direct way to the pattern of trade in goods and services. Expectations, speculations, and fear that the U.S. government might freeze foreign assets have an effect on the euro's overvaluation.<sup>73</sup> Of course, Europe has serious other socio-economic-political problems, due to the imposed integration on over 500 million people, without their will.

## V. EPILOGUE

The current analysis gives some interesting results for the two economies (U.S. and EMU). The uncertainty is measured with the price of gold as a proxy, here. When the risk is increasing, investors abandon the investments in financial assets and hoard gold. The excess demand for gold, during this period of global uncertainty, heightens the price of gold. The empirical results show that the uncertainty ( $p_{Gold}$ ) causes the U.S. national debt to go up, due to increase in government spending, reduces consumption, and depreciates the U.S. dollar. In the Euro-zone, the uncertainty causes unemployment, appreciation of the euro, and affects positively investment and growth. The price of oil is causing, in the U.S., inflation, reduction in saving, increase in debts and taxes. In the EMU, the price of oil causes a reduction in output, an increase in trade and investment. In the U.S., the unanticipated money supply causes unemployment, the unanticipated federal funds rate reduces unemployment, the unanticipated price of oil reduces real output and causes inflation, and the unanticipated price of gold causes inflation. The anticipated federal funds rate causes inflation, the anticipated price of oil reduces production and causes unemployment, the anticipated price of gold reduces real output and increases unemployment. In the Euro-zone, the unanticipated money supply causes inflation and an increase in real production; the unanticipated price of oil has positive effects on prices and employment. Finally, the anticipated price of gold (uncertainty) causes reduction in real production.

The economic and social indicators reveal that the U.S. from a moral, ethical, and just superpower is becoming less and less competitive<sup>74</sup> and less friendly with the rest of the world.<sup>75</sup> European Union (the forced integration of 27 sovereign nations, without referenda) is the worst "innovation" in human history. It is a mixture of twenty seven nations without domestic public policies, without self-determination, without sovereignty, and of course, without any future.<sup>76</sup> All these strange evolutions have increase the global uncertainty,



have caused unemployment in EU<sup>77</sup> and the U.S., have reduced competitiveness, and have augmented anxiety and health problems (mental<sup>78</sup> and physical) to citizens. Then, what are the social benefits? Why we need these global changes and “evolutions”, which are against humanity?

The data and the “News” show that the uncertainty is tremendous and is growing. The U.S. economy is losing competitiveness and the unemployment in Europe is holding steadily (in some regions, it is 40%). The U.S. economy is doing better than the European, but the euro is doing much better than the dollar. Paradox! The current world is a big paradox, so we are not surprised any more. The U.S. income is affected by national debt, corporate bonds rate, spot exchange rate, and money supply. The European unemployment is caused by exports, imports, and interest rates. Also, a tremendous interdependence exists between the U.S. and the European economy.<sup>79</sup> The unanticipated and anticipated money supply is affecting the real income, prices, and unemployment rate. We see that the U.S. and the EU financial markets rise and fall together, but trade and FDI influence the movement of real economic variables, such as output, prices, and unemployment. The two economies move very close and a demand shock in the one ripples through the other via imports and exports, as correlation coefficients and causality tests are shown.

Lastly, the uncertainty causes unemployment in Europe and overvaluation of euro; it causes national debt to increase, consumption to fall and the dollar to be undervalued. But, even with undervalued dollar, the U.S. has lost its competitiveness. The U.S. economy has two major problems; overconsumption (underproduction and waste of resources) and lack of savings (dis-saving and borrowing or spendthrift<sup>80</sup>). These cause current account deficits and capital account surpluses, which devalue the U.S. dollar and affect the financial markets, the interest rates, the national debt, the oil prices, and the inflation. Actually, there is a vicious cycle in the economy. The global uncertainty, the illegal migration, and the other domestic problems, due to globalization and integration are going to change our economic system (many economic laws do not hold anymore) to “glob-onomics” or “shock-onomics”. The entire world is very pessimistic, due to continuing housing downturn, credit crunch, and rising prices for energy and food. The only prediction that we can do for the future, after the current stagflation, is that this new economic system will be the last and the worst in our socio-economic history, except if we will decide to go back to a value oriented system, controlled by the government inside each sovereign nation.

### Notes

1. Economics/Finance Department, The Arthur J. Kania School of Management, University of Scranton, Scranton, PA 18510, U.S.A. A previous version of this paper has been presented at the 34<sup>th</sup> Annual Conference of the Eastern Economic Association at the Boston Park Plaza Hotel, Boston, MA, March 7-9, 2008. I would like to acknowledge the assistance provided by Brandon Dragone and Marina Kallianiotis. Financial support (professional travel expenses, etc.) was provided by Henry George Research Funds (Robert Schalkenbach Foundation). 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...” (*The Pew Global Attitudes Project*, October 4, 2007).
3. A CBO report estimated that \$440 billion has been spent on fighting in Iraq since the war began and the worst of all thousands of lives have been lost. (*The Wall Street Journal*, January 24, 2008,

- p. A1). Further, suicides by soldiers rose 20% in 2007 from 2006, despite more mental-health programs, the U.S. Army reported. (*The Wall Street Journal*, February 1, 2008, p. A1).
4. Turkey said its ground troops have entered northern Iraq since November 2007. On March 12, 2008, Turkish troops killed 11 Kurdish defenders during clashes inside the border with Iraq. (*The Wall Street Journal*, March 13, 2008, p. A1).
  5. A former Army engineer was arrested on charges he gave classified nuclear-weapons documents to Israel. (*The Wall Street Journal*, April 23, 2008, pp. A1 and A2).
  6. NATO and EU divided Yugoslavia in seven nations and they want to put the responsibility to Serbia because it was defending its nation. (*The Wall Street Journal*, January 29, 2008, p. A1). Albanians with the help of the West took advantage of the Serbian hospitality for 60 years and they seize Kosovo from Serbia. (*The Wall Street Journal*, February 19, 2008, pp. A1 and A6). A State Department official said the following outrageous excuse that, "U.S. recognition of Kosovo was an exception to a policy of discouraging secession". (*The Wall Street Journal*, March 13, 2008, p. A1).
  7. An artificial nation inhabited by Slavs, Albanians, Greeks, Bulgarians, and Gypsies, which has no relationship with Greece, her history, language, civilization, or anything else. Its name before 1940 was Vardarska. Now, after Kosovo's occupation by Muslim Albanians, it is the next aim of Albania. See, Kallianiotis (1992).
  8. Poland reached an agreement in principle with the U.S. on plans to install a missile-defense system, a major source of tension with Russia; a reanimation of the cold war. (*The Wall Street Journal*, February 2-3, 2008, p. A1).
  9. See, *The Wall Street Journal*, March 14, 2008, pp. A1 and A3. Terrorism exists, but propaganda exaggerates the true dimensions of this virus. Also, many times, we do not know who the terrorists are and who are cultivating this "modern social behavior". Police in Sweden arrested two men after they tried to enter a nuclear plant with traces of a powerful explosive. (*The Wall Street Journal*, May 22, 2008, p. A1).
  10. Rival Kenya ethnic groups battled before scheduled talks on January 28, 2008, between the president and opposition leader. The death toll from post-election violence had topped 800. Also, rebels battled pro-government fighters in eastern Congo, the first fighting since last week's peace deal. (*The Wall Street Journal*, January 29, 2008, pp. A1 and A9).
  11. A Russian court upheld a ruling that PricewaterhouseCoopers was effectively a participant in tax evasion by Yukos. (*The Wall Street Journal*, January 29, 2008, pp. A1 and A9). Deutsche Post CEO Klaus Zumwinkel is the subject of a German criminal probe into whether he evaded taxes. (*The Wall Street Journal*, February 15, 2008, pp. A1 and A10). Germany is living through its own version of the days of Enron and Tyco. Tax evasion is a big issue in all over Europe. (*The Wall Street Journal*, March 4, 2008, pp. A1 and A14). Siemens said an employee amnesty program is helping it identify executives responsible for bribery schemes. There are allegations that 14 elite NYSE traders were cheating investors. (*The Wall Street Journal*, March 5, 2008, pp. A1, A4, and C3). Also, see *Transparency International* (CPI).
  12. An Austria man confessed to imprisoning his daughter for 24 years and fathering seven children with her. (*The Wall Street Journal*, April 29, 2008, p. A1).
  13. Crop losses from global warming are likely to be the worst in Africa, India, and Pakistan, researchers said. (*The Wall Street Journal*, February 1, 2008, p. A1).
  14. Nearly half of adults in the U.S. have switched from the faith in which they were raised or have dropped any religious affiliation, a survey found. (*The Wall Street Journal*, February 26, 2008, pp. A1 and D1).
  15. China executed more people than any other country in 2007. Iran ranked second-highest and the U.S. fifth. This is our civilization in this gloomy 21<sup>st</sup> century. (*The Wall Street Journal*, April 15, 2008, pp. A1 and A10).

16. See, *Bloomberg.com*, May 22, 2008. Diesel's rise is being driven by stockpiling in China ahead of the Olympic Games and the prospect of more fuel needed to aid rebuilding efforts after last week's earthquake with more than 51,000 deaths and 29,000 remain missing. (*The Wall Street Journal*, May 19, 2008, pp. A1 and C6). Shell said it earned \$31.3 billion in 2007, due to the soaring oil prices and the inelastic demand for oil. (*The Wall Street Journal*, February 1, 2008, pp. A1, A10, and C12). Also, Exxon earned \$40.61 billion in 2007, which was the largest annual profit in U.S. corporate history. (*The Wall Street Journal*, February 2-3, 2008, pp. A1 and A3). French fishermen blocked ports in a battle over fuel costs. (*The Wall Street Journal*, May 23, 2008, pp. A1 and A9).
17. Gold prices have risen more than 272% in the last seven years, an indication of high uncertainty for the investors, speculators, and opportunists. The price of gold has chased the following trend: 2001:01 \$271.00/ounce, 2002:01 \$278.00, 2003:01 \$344.00, 2004:01 \$416.00, 2005:01 \$428.00, 2006:01 \$530.00, 2007:01 \$640.00, and 2008:03 \$1,007.10/ounce of gold. (*Kitco.com* and *Bloomberg.com*, 3/3/2008).
18. See, *The Wall Street Journal*, January 31, 2008, pp. A1, A2, and C9.
19. See, *The Wall Street Journal*, May 20, 2008, p. C12.
20. See, *The Wall Street Journal*, April 14, 2008, p. A1. Myanmar's death toll rose to nearly 78,000. Damage to farms threatens the rice harvest and could result in food shortages. (*The Wall Street Journal*, May 17-18, 2008, pp. A1 and A5). Wheat prices soared amid concerns about drought hurting Australia's output. (*The Wall Street Journal*, May 20, 2008, pp. A1, A3, and C14).
21. The Fed and two other regulators plan to propose strict new policies on credit-card issuers, a move drawing concern from banking officials. (*The Wall Street Journal*, April 29, 2008, pp. A1 and A3).
22. Federal Reserve Chairman, Ben S. Bernanke, battling the worst housing recession in a quarter century, urged lenders to forgive portions of mortgages held by homeowners at risk of defaulting. The number of U.S. homeowners entering foreclosure rose 75% in 2007, for the year, more than 2.2 million default notices, auction notices and bank repossessions were reported on about 1.3 million properties. (*Bloomberg.com*, 3/4/2008). The write-downs of bad loans of the largest financial institutions are tremendous (total \$215.82 billion). The largest write-downs were: UBS = \$38.29 billion, Merrill Lynch = \$25.09, Citigroup = \$21.65, AIG = \$17.20, Morgan Stanley = \$13.12, Bank of America = \$7.70, Deutsche Bank = \$7.35, Royal Bank of Scotland = \$6.00, Credit Agricole = \$5.96, AMBak = \$5.95, Societe Generale = \$4.85, Bear Sterns = \$4.53, CIBC = \$4.22, Fortis = \$4.21, and Credit Suisse = \$4.13 billion. (*The Wall Street Journal*, April 2, 2008, pp. A1 and A10).
23. See, *The Wall Street Journal*, May 17-18, 2008, pp. A1 and A2.
24. See, *The Wall Street Journal*, January 2, 2008, section R, pp. R1-R26 and January 3, 2008, pp. A1, A2, A3, A6, A7, A8, and C1. Also, an estimated 151,000 Iraqis have died from violence since the U.S.-led invasion in 2003. The Pentagon is preparing to send at least 3,000 Marines to Afghanistan in April 2008. Kosovo's parliament elected a former rebel leader as prime minister, who vowed that the province is only weeks away from independence and actually was declared on February 17, 2008. (*The Wall Street Journal*, January 10, 2008, pp. A1 and A4). The EU food-safety agency endorsed meat and milk derived from cloned animals ("Franken-foods"), following the U.S. Food and Drug Administration. They forgot the mad-cow disease, dioxins, and all the other "scientific" problems that have been created with their intervention to nature and creation. (*The Wall Street Journal*, January 12-13, 2008, pp. A1 and A4). Further, Canada's Foreign Ministry put the U.S. and Israel on a torture watch list, a move likely to embarrass the government, an ally of both. (*The Wall Street Journal*, January 18, 2008, p. A1). This is just the beginning of the creeping infinite costs of "glob-onomics".
25. In a speech at the World Economic Forum in Davos, Switzerland, Bill Gates, Microsoft chairman, called for a "creative capitalism", which will use market forces to address poor-country needs.

But, the shortcomings of capitalism is that cannot improve social welfare, fairness, justice, democracy, virtues, and values; and it is becoming worse by its passion towards globalization and control of governments and individuals by the businesses (money). (See, *The Wall Street Journal*, January 24, 2008, pp. A1 and A15).

26. The U.S. dollar declined with respect the other currencies during 2007:

<i>Currencies</i>	<i>%Δ in 2007</i>	<i>Spot rate (12/31/2007)</i>
Euro	down 9.6%	1.4599 \$/euro
British pound	down 1.5%	1.9869 \$/pound
Canadian dollar	down 14.8%	1.0063 \$/C\$
Japanese yen	down 6.4%	111.45 yen/\$
Brazilian real	down 16.7%	0.5618 \$/real

*Source:* The Wall Street Journal, January 2, 2008, p. R6.

27. Consumers have lost purchasing power during 2007 and every year we are becoming poor.

<i>Items</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>
Single-Family Home	\$219,600	\$221,900	\$217,600
Toyota Camry	\$19,545	\$19,725	\$20,025
Unleaded Gasoline	\$2.32	\$2.60	\$2.82
Pair of Jeans	\$39.50	\$39.50	\$44.50
Internet Service	\$42.95	\$42.95	\$42.95
Tax Preparation	\$146.75	\$155.20	\$165.06
Hospital Stay (1 day)	\$4,848	\$5,261	\$5,504
McDonald's (Big Mac)	\$2.43	\$2.57	\$2.76
Clearing Clogged Sink	\$212.00	\$230.55	\$243.46
Movie Ticket	\$6.41	\$6.55	\$6.82
Airline Ticket (2,000-mile)	\$246	\$260	\$258
Birth (cost excluding physician's)	\$7,907	\$8,168	\$9,873
A Year in College	\$17,799	\$19,014	\$20,024
Funeral	\$6,734	\$6,951	\$7,170

*Source:* The Wall Street Journal, January 2, 2008, p. R8.

28. See, Kallianiotis (2007a).
29. A serious problem in our financial market has been caused by hedge funds, which use complex trading strategies, and are posting big declines, while some are shutting down. These funds need to be controlled by the authorities. (*The Wall Street Journal*, February 23-24, 2008, p. A1). Also see, Kallianiotis (2003).
30. TV News *ALTER*, 4/28/2008.
31. See, Kallianiotis (2007c).
32. Number of barrels of oil consumed per person in 2006: Saudi Arabia (32.88), U.S. (25.64), Canada (24.83), Netherlands (22.54) and South Korea (16.18). See, *The Wall Street Journal*, December 12, 2007, p. A1.
33. Bloomberg.com, May 27, 2008 and *The Wall Street Journal*, March 26, 2008, pp. A1 and A2.
34. See, *The Wall Street Journal*, April 1, 2008, pp. A1 and A10.
35. See, *Bloomberg.com*, April 4, 2008.
36. See, *The Wall Street Journal*, April 11, 2008, pp. A1 and A12.
37. See, *The Wall Street Journal*, April 26-27, 2008, pp. A1 and A2.
38. See, *The Wall Street Journal*, April 12, 2008, pp. A1 and A11.

39. See, *The Wall Street Journal*, April 19-20, 2008, pp. A1 and A2.
40. See, *The Wall Street Journal*, April 21, 2008, pp. A1 and C6.
41. According to statistics, Catholics who are going to church in the west today is only 5% of the population; when in 1960 this percentage was 80%. In Holland the situation is worse; they report that in a few years there will be no Christians in this liberal country. Churches are sold in the west and the Russian and the Greek Orthodox Churches are buying some because they become homes and restaurants and transform them into Orthodox Churches. Sir Steven Runciman had said that "in the next 100 years, Orthodoxy will be the only historic Church in existence... the Orthodox Church will be preserved in contrast to the other churches". See, *Voanerges*, 33, September-October 2007, pp. 88-89.
42. The correct objective function of an individual is to maximize his effort to become a perfect human being, subject to all these negative social influences, and of course with patience, hope, forgiveness, and unconditional love.
43. A U.K. parliamentary panel told investment banks to demystify the complex financial products they sell or risk more regulation. (*The Wall Street Journal*, March 3, 2008, pp. A1 and A2). The deregulation, which started in 1980s and is continued will cause serious problem in our financial world.
44. Fleckenstein and Sheehan (2008) said that Alan Greenspan has a long history of slashing interest rates to bail out investors who should not need rescuing. This Greenspan's bubble blowing is responsible for our fragile financial state and the economic instability. Of course, for the global political chaos, the responsibility falls on the U.S. leaders of the last decades.
45. See, *The Wall Street Journal*, March 13, 2008, pp. A1, A2, and A16.
46. See, *The Wall Street Journal*, March 20, 2008, p. C1.
47. See, *The Wall Street Journal*, April 29, 2008, p. A1.
48. See, *The Wall Street Journal*, May 10-11, 2008, pp. A1 and A3.
49. See, *The Wall Street Journal*, April 28, 2008, pp. A1, B3, and C2.
50. See, *The Wall Street Journal*, April 26-27, 2008, pp. A1 and A3. It seems that this will be the first project of Hillary Clinton that is why they drive her forward with all their means as the next president of the U.S.A.
51. See, *The Wall Street Journal*, April 29, 2008, pp. A1 and A2. President George Bush did this (fiscal stimulus program) once during his first year in office (2001) and a second time now (2008).
52. Germany/DAX: -14%, France/CAC40: -11%, Russia/RTS: -7.3%, U.S./DJIA: -1.9%, China: -30%, India/Sensex: -15%, Japan/Nikkei: -10%, Chile/IPSA: -2.1%, Argentina/Merval: -2.6%, Peru/IGBVL: -0.5%, Venezuela/Caracas Gen.: -0.6%, Canada/S&P?TSX: +1.7%, Mexico/IPC: +2.5%, Brazil/Bovespa: +6.2%. (*The Wall Street Journal*, May 2, 2008, pp. C1 and C2).
53. See, *The Wall Street Journal*, May 8, 2008, pp. A1, A3, C1, and C10.
54. *Bloomberg.com*, May 8, 2008.
55. See, *The Wall Street Journal*, May 9, 2008, pp. A1 and A9.
56. These projections are relatively efficient and their opportunity cost is minimized, too.
57. This is not natural at all; our market oriented capitalistic system is causing the economic variables to be at this "natural" level, which is not the optimal one.
58. The forecasting equation can be written with only lagged values of X's as explanatory variables,  

$$X_t = \delta(L) X_{t-1} + \varepsilon_t \quad (3')$$
59. See, Lucas (1973).
60. People who know  $\Pi_{t-1}$  are maximizing their utility by minimizing their fatal costs.

61. The pure autoregressive model is:  $X_t = \alpha_0 + \sum_{i=1}^p \alpha_i X_{t-i} + \varepsilon_t$  (7')

62. It is possible to combine a moving average process with a linear difference equation to obtain an autoregressive-moving average model:  $X_t = \alpha_0 + \sum_{i=1}^p \alpha_i X_{t-i} + \sum_{i=0}^q \beta_i \varepsilon_{t-i}$  (7 \*\*\*)

See, Enders (1995).

63. See, Granger (1969).

64. The price of gold ( $P_{\text{Gold}}$ ) increases drastically in periods of uncertainty, for this reason can be used as a proxy of measurement of risk. For example, when a suicide bombing killed former Prime Minister of Pakistan, Benazir Bhutto, on December 27, 2007, the gold price reached \$841.80 per ounce. (Bloomberg.com, 12/28/2007).

65. All these results are available from the author upon request.

66. In 2001:07, it was  $S=0.8615$  \$/euro and in 2008:04 became  $S=1.6001$  \$/euro. (Economagic.com and Bloomberg.com, 4/22/2008). In May 2008, it was  $S=1.5461$  \$/euro (Bloomberg.com, 5/14/2008) and continues to fluctuate.

67. Trade deficit in U.S. widened to a record in 2005 reaching \$726 billion, even though that the U.S. dollar was depreciated. (Bloomberg.com, 2/10/2006). The current account for the 2006 showed a deficit of \$722 billion and for the 2007 had a deficit of \$708 billion. (Bureau of Economic Analysis, International Economic Accounts, U.S. Department of Commerce).

68. It is amazing that many Americans do not wary at all for their wealth, which is hold by foreigners. Foreigners also hold very important positions in government, in institutions, in education, and elsewhere. Are they acting in favor of the U.S. citizens or not? The country cannot rely completely on them because it will follow the other fallen empires in human history. The current American foreign policy is completely anti-American because it created only enemies for the U.S.A. See, *Euro-barometer*, published in Newspaper *El Pais* (Newspaper *Imerissia*, November 3, 2003, p. 27), where the U.S.A. is presented as the number two danger for the global peace.

69. Correlation between current account and exchange rate is  $\rho_{CA,S} = -0.765$  and a regression shows that CA deficit depreciates the U.S. dollar:

$$S_t = 0.032 - 0.001 * CA_t + 1.266^{***} S_{t-1} - 0.311^{***} S_{t-2}$$

$$(0.021)(0.001) \quad (0.097) \quad (0.096)$$

$$R^2 = 0.976, SSR = 0.060, D - W = 1.886, F = 1,299.28, N = 100$$

The causality is from  $S \Rightarrow CA$ .

70. But, it cannot be biofuel, which affect negatively the commodity and food markets.

71. 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 markets.

72. i.e., in the U.S., the  $i_{FF} = 2\%$  and in EMU, the  $i_{OND}^* = 4\%$  (in May 2008).

73. Kallianiotis (2007a) says that a decline in ( $i_{FF} \downarrow$ ) and in ( $i_{OND}^* \downarrow$ ) will reduce the spot exchange rate ( $S \downarrow$ ,  $\$ \uparrow$  and *euro*  $\downarrow$ ). It seems that this is the current monetary policy, at least from the U.S.

74. Beijing blasted the U.S. over allegations of Chinese espionage and defended China's connection with Sudan. (*The Wall Street Journal*, February 15, 2008, pp. A1 and A9).

75. 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.

76. For example, in EU, 73.8% are against privatization, 80.9% are against Turkey's entrance to EU, 83.6% are against Euro-constitution (Treaty of Lisbon), 71.6% want to go back to their previous national currencies, 71.5% of Greeks are in favor of vetoing Skopje's (Vardarska's) entrance to NATO and EU, Europeans are against the independence of Kosovo, and 86.1% of Greeks are against the marriage of homosexuals. (e-grammes.gr., different polls). Europeans are actually against this "anti-European creature", the EU.
77. The main reason for unemployment in Europe is the illegal and uncontrolled immigration. Europe is in trouble to lose its thousands years old identity.
78. A gunman opened fire in a lecture hall at Northern Illinois University, injuring up to 15 people before he was killed. (*The Wall Street Journal*, February 15, 2008, p. A1). These incidents are very often, lately and Europeans started mimicking U.S., too.
79. Unfortunately, this relationship in politics is completely a unilateral dependence. The controlled U.S. is in control of EU.
80. See Kallianiotis (2007a).

### References

- Angeloni, Ignazio, Anil K. Kashyap, Benoit Mojon, and Daniele Terlizzese (2003), "The Output Composition Puzzle: A Difference in the Monetary Transmission Mechanism in the Euro Area and the United States", *Journal of Money, Credit and Banking*, Vol. 35, No. 6, Part 2, December, pp. 1265-1306.
- Bender, Keith, Rebecca M. Neumann, and John Douglas Skatun (2006), "Unemployment and other Measures of Labor Market Inefficiency: A Comparison of U.K. and U.S. Labor Markets 1931-96", *Economic Inquiry*, Vol. 44, No. 4, October, pp. 629-643.
- Brock, William, Steven N. Durlauf, and Kenneth D. West (2003), "Policy Evaluation in Uncertain Economic Environments", *Brookings Papers on Economic Activity*, Vol. 2003, No.1, pp. 235-301.
- Chambers, Alex (2007), "Is the Banking Boom Sustainable?", *Euromoney*, Vol. 38, February, pp. 84-87.
- Dickey, David and Wayne A. Fuller (1979), "Distribution of the Estimates for Autoregressive Time Series with a Unit Root", *Journal of the American Statistical Association*, 74, June, pp. 427-431.
- Enders, Walter (1995), *Applied Econometric Time Series*, John Wiley & Sons, Inc. New York, U.S.A.
- Fleckenstein, William and Fred Sheehan (2008), *Greenspan's Bubbles: The Age of Ignorance at the Federal Reserve*, McGraw-Hill, N.Y., U.S.A.
- Galbraith, James and Enrique Garcilazo (2004), "Unemployment, Inequality and the Policy of Europe: 1984-2000", *Banca Nazionale del Lavoro Quarterly Review*, Vol. 57, Issue 228, March, pp. 3-28.
- Granger, C. W. J. (1969), "Investigating Causal Relations by Econometric Models and Cross-Spectral Methods", *Econometrica*, 37, pp. 424-438.
- Greenspan, Alan (2004), "Risk and Uncertainty in Monetary Policy", *American Economic Review*, Vol. 94, No. 2, May, pp. 33-40.
- Guidolin, Massimo and Elizabeth A. La Jeunesse (2007), "The Decline in the U.S. Personal Saving Rate: Is it Real and is it a Puzzle?", *Review*, Federal Reserve Bank of St. Louis, Vol. 89, No. 6, November/December, pp. 491-514.
- Hodrick, R. J. and E. C. Prescott (1997), "Postwar U.S. Business Cycles: An Empirical Investigation", *Journal of Money, Credit, and Banking*, 29, pp. 1-16.
- Johansen, Soren (1991), "Estimation and Hypothesis Testing of Cointegration Vectors in Gaussian Vector Autoregressive Models", *Econometrica*, 59, pp. 1551-1580.

- Johansen, Soren (1995), *Likelihood-based Inference in Cointegrated Vector Autoregressive Models*, Oxford: Oxford University Press.
- Kallianiotis, Ioannis N. (2008a), "The Three Socio-Economic Miseries: Global Uncertainty, European Unemployment, and the Waning American Competitive Games", unpublished manuscript, *University of Scranton*, May, pages 45.
- Kallianiotis, Ioannis N. (2008b), "Global Uncertainty, European Unemployment, and the Waning American Competitive Games", unpublished manuscript, *University of Scranton*, March, pages 47.
- Kallianiotis, Ioannis N. (2008c), "Interdependence between U.S. and EU Goods, Money, and Foreign Markets and Spillover Effects", unpublished manuscript, *University of Scranton*, January, pages 24.
- Kallianiotis, Ioannis N. (2007a), "Economic Fundamentals, Expediency, or Naïve Speculation Caused the Euro's Overvaluation", unpublished manuscript, *University of Scranton*, November, pages 44.
- Kallianiotis, Ioannis N. (2007b), "Macroeconomic Shocks and Public Policy Effectiveness in Open Economies: U.S.A. and European Union", *2007 Conference Proceedings of NBEA*, Central Connecticut State University, New Britain, CT, November 8-9, pp. 164-167.
- Kallianiotis, Ioannis N. (2007c), "Europe: A Swift Historical Journey from the Ancient Times to the Current European Union", unpublished manuscript, *University of Scranton*, December, pages 104.
- Kallianiotis, Ioannis N. (2007d), "Transmission Mechanism through Aggregate Demand and Supply and Public Policy Effectiveness between the U.S.A. and the EMU", unpublished manuscript, *University of Scranton*, July, pages 33.
- Kallianiotis, Ioannis N. (2003), "American Business Objective: An Alternative Approach", *The Journal of American Academy of Business*, Cambridge, Vol. 3, No. 1 & 2, September, pp. 197-204.
- Kallianiotis, Ioannis N. (1992), *Hellas: A Swift Historical Journey and the Macedonian Question*, Hellenic Orthodox Church of the Annunciation, Scranton, PA, U.S.A.
- Kallianiotis, Ioannis N. and Iordanis Petsas (2006), "Public Policy Effectiveness on a Loss to Society Function and Inflation Dynamics", *Spoudai*, Vol. 56, No. 2, April-June, pp. 7-43.
- Krugman, Paul (1983), "Oil Shocks and Exchange Rate Dynamics", in *Exchange Rates and International Macroeconomics*, edited by Jacob A. Frenkel, The University of Chicago Press, Chicago, IL, U.S.A., pp. 259-271.
- Kumar, Anil (2007), "Globalizing Texas: Direct Investment and Business Cycles", *Southwest Economy*, Issue 6, November/December, pp. 11-13.
- Lucas, R. E., Jr. (1973), "Some International Evidence on Output-Inflation Tradeoffs", *American Economic Review*, 63, pp. 326-334.
- Mishkin, Frederic S. (1983), *A Rational Expectations Approach to Macroeconometrics: Testing Policy Ineffectiveness and Efficient-Markets Models*, National Bureau of Economic Research, The University of Chicago Press, Chicago, U.S.A.
- Pakko, Michael R. (2004), "Considering the Capital Account", *International Economic Trends*, The Federal Reserve Bank of St. Louis, November, p. 1.
- Pindyck, R.S. and Rubinfeld, D.L. (1981), *Econometric Models and Economic Forecasts*, McGraw-Hill, New York.
- Pissarides, Christopher (2007), "Unemployment and Hours of Work: The North Atlantic Divide Revisited", *Economic Review*, Vol. 48, No. 1, February, pp. 1-36.
- Ross, Steven and Claudia Wolf (2007), "The Risk Intelligent Enterprise", *Risk Management*, Vol. 54, Issue 6, p. 44.
- Sargent, Thomas J. (1979), *Macroeconomic Theory*, Academic Press, New York, U.S.A.



Stewart, Kitty (2005), "Dimensions of Well-Being in EU Regions: Do GDP and Unemployment Tell us All we Need to Know?" *Social Indicators Research*, Vol. 73, Issue 2, September, pp. 221-246.

Veracierto, Marcelo (2008), "Corruption and Innovation", *Economic Perspectives*, Federal Reserve Bank of Chicago, Vol. XXXII, Issue 1, First Quarter, pp. 29-39.



This document was created with the Win2PDF “print to PDF” printer available at <http://www.win2pdf.com>

This version of Win2PDF 10 is for evaluation and non-commercial use only.

This page will not be added after purchasing Win2PDF.

<http://www.win2pdf.com/purchase/>