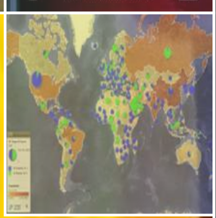
2012

Why Another ShockWave Will Lead to Economic Doomsday?

An Interesting Story of Money, Power and Authority

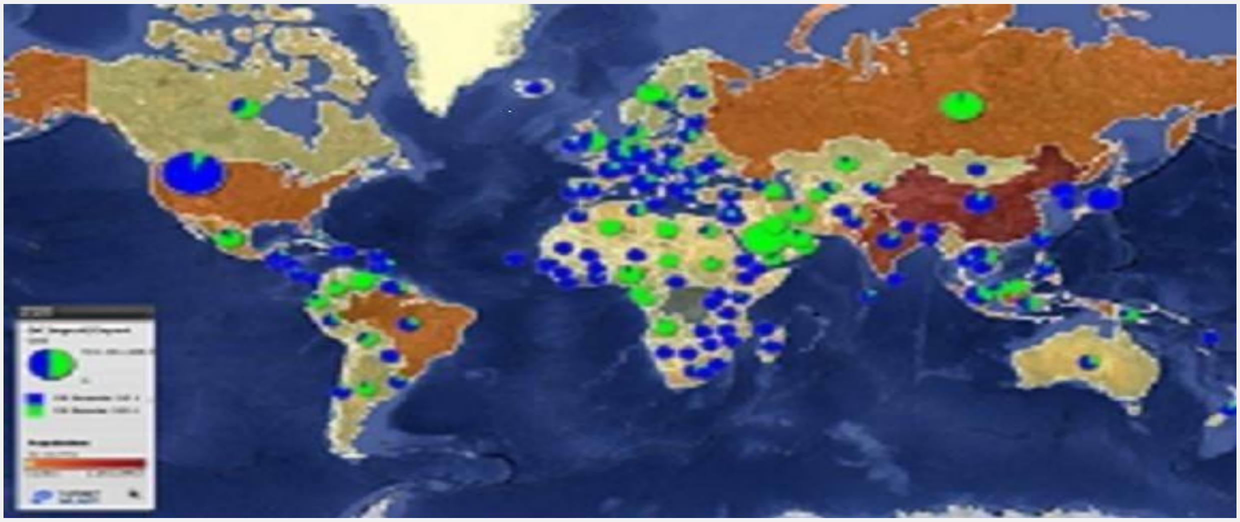


The world had survived the first Oil Embargo ShockWave. It has survived the second Oil Price ShockWave. Will it be able to absorb the third? I don't think so. The first ShockWave was unexpected. The second was engineered. And… the third will be well planned, far more precise, smooth and flawless. The economists will never understand the reason for and the nature of the ShockWaves that they have overlooked so far. "The last three global recessions (prior to 2008)," according to Nouriel Roubini in "Scary Oil" posted on EconoMonitor of March 15, 2012, "were each caused by a geopolitical shock in the Middle East that led to a sharp spike in oil prices. The 1973 Yom Kippur War between Israel and Arab states led to a global stagflation (recession and inflation) in 1974-1975. The Iranian revolution in 1979 led to global stagflation in 1980-1982. And Iraq's invasion of Kuwait in the summer of 1990 led to the global recession of 1990-1991. Even the recent global recession, though triggered by a financial crisis, was exacerbated by spiking oil prices in 2008. With the barrel price reaching $145 in July of that year, oil-importing advanced economies and emerging markets alike faced a recessionary tipping point." Was it an economic earthquake the ripples of which are felt even today and consumers and governments both are struggling without any sign of success to protect themselves from its fall out or blessing in disguise for big banks and corporations? If it was not either of the two then why did the regulators and banking and financial institutions had failed to see it coming and precisely measure the expected fallout with acceptable plus or minus margin? Even if they had done that why they did not declare the actual outcome of their exercise and warn the governments and the people? On top of that the regulators were also either unaware of the developments or pretending to be unaware. Why the people and the governments were and are trapped and what was and is still the way out? "It is no longer conflict between heavily armed superpowers," according to Lester Brown in his article, "The Great Food Crisis of 2011," published in Foreign Policy magazine on January 10, 2011, "but rather spreading food shortages and rising food prices -- and the political turmoil this would lead to -- that threatens our global future. Unless governments quickly redefine security and shift expenditures from military uses to investing in climate change mitigation, water efficiency, soil conservation, and population stabilization, the world will in all likelihood be facing a future with both more climate instability and food price volatility. If business as usual continues, food prices will only trend upward."

Zahid Hussain Khalid
Written for my blogs on Slideshare, WordPress and Facebook
9/15/2012

Why Another Oil ShockWave Will Lead To Economic Doomsday?

By: Zahid Hussain Khalid



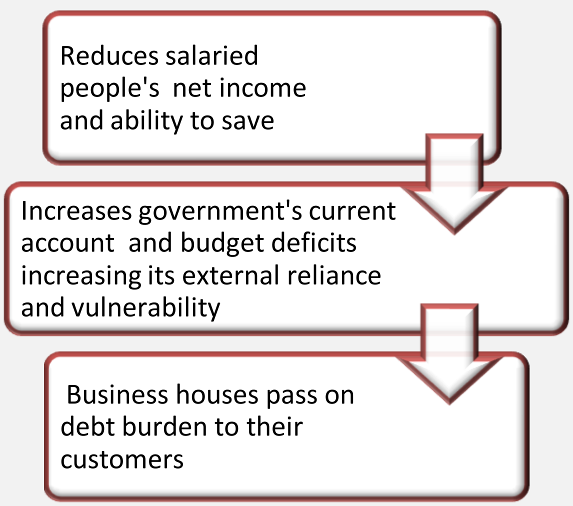
INTRODUCTION

The world had survived the first Oil Embargo ShockWave. It has survived the second Oil Price ShockWave. Will it be able to absorb the third? I don't think so. The first ShockWave was unexpected. The second was engineered. And… the third will be well planned, far more precise, smooth and flawless. The economists will never understand the reason for and the nature of the ShockWaves that they have overlooked so far. What ever they discuss that reflects their perfect knowledge of theories and historical pattern of actions in and reaction to market curves, demand and supply fluctuations subsequent waves of inflation and fears of deflation, announcement of uneven austerity measures and pressures for further bail-outs and injection of money into struggling for recovery economic system. From Nouriel Roubini to Niall Ferguson, everyone having a credible name has come up with eye opening accounts of the past, present and the future scenarios and historical perspectives of the market situation and government response to economic challenges. A number of scholars, including the two I have named, have attempted to come up with credible linkage of global investment and debt spread with unrest in the resource rich economic zones in different parts of the world. Unfortunately, mainstream media has unintentionally overlooked the real causes and intended or unexpected consequences of behind the scene moves of those who were covertly working on a laudable natural Agenda of Globalization with a condemnable Destructive Approach. This destructive approach has escaped the attention that it prominently deserved.

“The last three global recessions (prior to 2008),” according to Roubini in “Scary Oil” posted on EconoMonitor of March 15, 2012, ***“were each caused by a geopolitical shock in the Middle East that led to a sharp spike in oil prices.*** *The 1973 Yom Kippur War between Israel and Arab states led to a global stagflation (recession and inflation) in 1974-1975. The Iranian revolution in 1979 led to global stagflation in 1980-1982. And Iraq’s invasion of Kuwait in the summer of 1990 led to the global recession of 1990-1991.* ***Even the recent global recession, though triggered by a financial crisis, was exacerbated by spiking oil prices in 2008. With the barrel price reaching $145 in July of that year, oil-importing advanced economies and emerging markets alike faced a recessionary tipping point.”***

My question is will the fourth global recession lead to Economic Doomsday? This is a question that needs to be focused by those who are at helm of the affairs in those capitals of the world that matter; those think tanks that are busy in building scenarios and conducting sensitivity analyses; and those scholars and researchers who think that the world needs a global economic direction and a leadership that has the vision and the ability to turn the world’s troubled resource rich regions into conflict free zones of global economic growth and prosperity.

VICTIMS OF THE ECONOMIC MESS

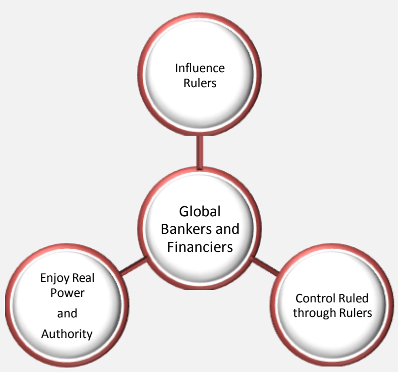


From a banker’s and financial institution’s perspectives the economic mess of today’s world has affected the domestic consumers and the governments due to the first’s inability to understand the way debt gradually reduces a domestic consumer’s income and his ability to save and second’s greed and indifference increases the current account and budget deficits adding to a country’s external reliance and economic vulnerability. The business houses have found an easy way to pass on their increased input costs and debt burden to customers making them poorer and poorer. According to the latest research the marketing is dead for a number of reasons - the only one not listed is the discretionary freedom granted to manufacturers, big farmers out of any government's regulatory net and service providers in a free economy to increase their prices and service charges as and when they please to make their balance sheets artificially and criminally healthy and impressive. Governments, with the connivance of mainstream and ideologically biased special interest business media groups, protect and very cleverly promote the speculators, manipulators and profiteers. How does this happen?

BANKING AND FINANCIAL INSTITUTIONS AND THE REGULATORS

Mayer Amschel Rothschild had very rightly said, "***give me a nation's currency and I don't care who makes the laws.***" Today his words have become a universally accepted reality across the globe. We see how this magical reality has mesmerized civil societies, political leaders, brains behind economic growth, diplomatic wheelers and dealers, military commanders, media owners and world's top ranking journalists, anchors and analysts. A majority of them, with rare exceptions, has become slave of money.

TRANSITION FROM MONEY TO POWER AND FROM POWER TO AUTHORITY



Money without power and power without authority is as tasteless as a spice less Mexican food. When money empowers an individual he seeks authority to use that power also - either directly or indirectly. When we try to understand the global power structure we notice that those who have the money control the rulers and rule the people through them. How it is done? The wealthy people and the managements of the companies they own are master in the art of selling ideas to the governments, ministries and departments. This is where wealth opens door on power and power translates into authority.

David Rothkopf describes that in detail in his Newsweek article “What Power Looks Like” updated online on April 5, 2008:

*“Being a successful central banker now depends on what Geithner calls ‘****a convening power*** *... that is separate from the formal authority of our institution and which can be a very powerful tool.’* ***He sketched in fascinating detail how the world's power elite rallies when the markets quake.*** *Recalling an earlier crisis in global securities markets that he helped to manage, Geithner said the Fed brought together the leaders of the world's 14 major financial firms, from five countries, representing 95 percent of all the activity in global markets. And we said to them,* ***‘You guys have got to fix this problem. Tell us (!) how (!) you (!) are going to fix it (!) and we will work out (!) some basic regime (!)*** *to make sure there are no free riders* ***(!)*** *to give you comfort* ***(!)****;* ***you know that if you move individually everybody else will move with you.’*** *There was nothing in writing, no rules, no formal process, and while no one asked the Fed to act, the Fed let everyone in the markets know it was acting.* ***The beauty of the process was its absolute efficiency, seeing what a tight circle of large firms with ‘some global reach’ could get done, fast****—with an executive committee of only four running the weekly conference call until the crisis was past. ‘There is no formal mechanism we could have used to force this on anybody, so we had to invent it. I think the premise going forward is that you have to have a borderless, collaborative process.* ***It does not mean it has to be universal, every jurisdiction or every institution,****’ said Geithner.* ***‘You just need a critical mass of the right players. It is a much more concentrated world’.***"

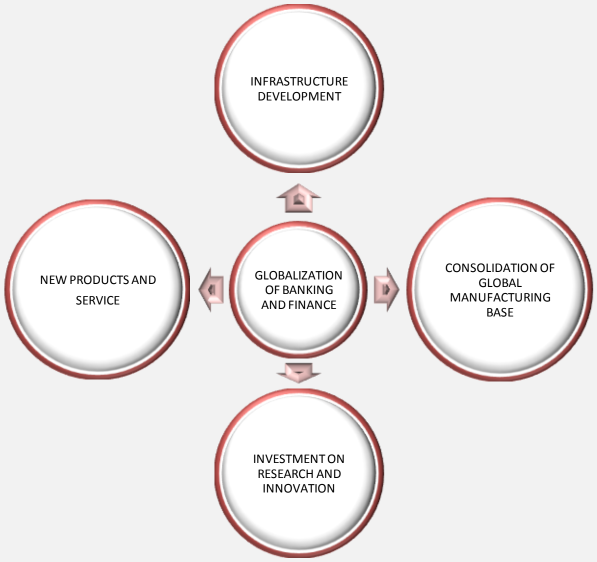
From this very interesting regulatory approach it is not difficult to understand that instead of studying the root cause of an economic mess and finding an appropriate solution, the regulators ask the trouble makers to do it for them and call it a convening power for their convenience. How the outcome of ***“convening power”*** is exercised and who exercises it? Is it the regulator or the regulated?

THE DEBT TRAP

This power is exercised by banking and financial institutions (add big corporations) as Geithner <u>innocently</u> admitted. Governments, head of states and regulators are temporary custodians of public mandate and the state is permanent. Public office holders (Cabinet Members and Parliamentarian) and regulators are like temporary employees of a **Strong** and **Permanent Sovereign Entity** – **The State**.

The men with unimaginable wealth have understood that a temporary employee can be easily tempted to betray his employer institution. So, they began to use the politicians and regulators.

GLOBALIZATION OF BANKING AND FINANCE



The first Oil Embargo ShockWave was a blessing in disguise for global bankers and financial institutions far more than the oil producing countries due to the strong dollar pull. They had enough money to invest anywhere in the world in any way they liked. A new era of financial globalization had dawned. They knowingly and unknowingly invested heavily in different good and bad, genuine and fake public and private sector projects across the globe for developing infrastructure, consolidating multinational manufacturing base, patronizing research and innovation in new technologies and for marketing new products and services. Even after doing that generously they were left with enough money to think of new possibilities and they made the unhindered inter-state flow of capital possible introducing the basic and advanced banking and financial system and its products like consumer credit, credit cards, auto loans, home finance, student loans, asset backed securities, leveraged buy-outs, credit default swaps, hedge funds, special investment vehicles, margin calls and shorting in the developing and under developed countries globalizing border-less banking and finance. Everything was done honestly with good faith because ***"major investors, like corporations and states,"*** according to excerpts from Gabor Steingart's best seller 'World War for Wealth: The Global Grab for Power and Prosperity,' *''clearly prefer security over fancy returns.* ***Their fear is stronger than their greed.*** *They'll freely relinquish the really fat profits as long as the stability of their billions is guaranteed. They're afraid of political unrest, they loathe overly dramatic changes in currency value and the mere thought of creeping inflation sends them into a state of panic.''*

This is where they failed to read the future that had something else in store beyond their skill in careful planning and cautious investments. They ignored major potential liabilities: Irresponsible governments and domestic consumers with fixed monthly income around the world. The regulators were equally ignorant of and blindly biased in impartially and realistically analyzing the developments on the political, diplomatic and military fronts. Though it is generally perceived and over-emphasized in so-called conspiracy theories that what ever happens in social, economic, political, diplomatic and military domains always has an invisible banker or financier behind it. This is where they stumbled.

Globally acclaimed economist Nouriel Roubini predicted "A coming Recession in the US Economy" on July 17, 2006, listed 12 steps to financial disaster in "The Rising Risk of Financial Melt Down" on February 5, 2008 and gave 8 reasons why Fed could not head the disaster off in "Can the Feds and Policy Makers Avoid a Systemic Financial Melt Down? Most Likely Not" on February 8, 2008.

ROUBINI'S TWELVE STEPS TO FINANCIAL DISASTER

Illustrations by ZHK

Roubini gave the following eight reasons for the failure of Feds and Policy Makers:

1. *US monetary easing is constrained by risks to the dollar and inflation*
2. *Aggressive easing deals only with illiquidity, not insolvency*
3. *The monoline insurers will lose their credit ratings, with dire consequences*
4. *Overall losses will be too large for sovereign wealth funds to deal with*
5. *Public intervention is too small to stabilize housing losses*
6. *The Fed cannot address the problems of the shadow financial system*
7. *Regulators cannot find a good middle way between transparency over losses and regulatory forbearance, both of which are needed*
8. *And, finally, the transactions-oriented financial system is itself in deep crisis.*

"While worst of the crisis, which followed the above check list to a tee," according to David Nowakowski in his "Live Blogging the Financial Meltdown: Nouriel's 26 Early Warning and Predictions" in EconoMonitor of August 31, 2012, *"is now past, its scars are still with us. Recalling the events is a reminder that the fallout of financial crises typically lasts many years and sometimes decades: economies and market functioning has not returned to normal (setting aside the EZ crises, which threatens the global economy). Policy makers and investors who think a quick recovery is around the corner are as deluded as they were in 2008, and continue to ignore the consequences of Nouriel's Twelve Steps – even long after they have transpired."*

In view of the above, it will be easy to understand the logic behind the assessment of Barack Obama's performance during the first term in office by **The Economist**:

First-term report card (Econ): Obama, Barack

Subject	Grade	Comment
Crisis response	A–	Bank stress tests executed; GM, Chrysler bail-outs suitably hardnosed
Stimulus	B+	Enormous package passed with speed; benefits oversold
Housing	C+	Showed potential but succumbed to political, legal and regulatory obstacles
Labour market	C+	College funding boosted; too little work on active policies
Trade	B–	Protectionist instincts suppressed; trade war with China avoided
Industrial policy	F	Green energy, high-speed rail a predictable sinkhole for taxpayer money
Regulation	D+	Belatedly rethought early impulse to solve every problem with new rules
Debt/fiscal policy	*Incomplete*	Republican obstructionism made tax, entitlement reform impossible; must try harder if he comes back next term

Source: *The Economist*

OIL EMBARGO AND THE IMPACT OF POST 9/11 OIL PRICE SHOCKWAVE SIMULATION EXERCISE

Almost three decades after Oil Embargo ShockWave and exactly after a decade of the most condemnable 9/11 Act of Barbarianism the global social, economic, political, diplomatic and military priorities and plans have changed in such a way that today globally aligned and universally accepted configuration of the fundamental elements of predictable and sustainable economic growth in capitalist as well as non-capitalist economies has been alarmingly disconfigured resulting in varying levels of social unrest, economic uncertainty, political chaos, diplomatic confusion, military conflicts and war on terror. Contrary to Gabor Steingart's then accepted convincing argument, the economic scholars and observers did not notice that now the investors, states and corporations are surprisingly not afraid of political and social unrest, they do not loathe overly dramatic changes in currency value and the mere thought of creeping inflation does not send them into a state of panic. Even in Euro Zone they are taking time to

COMBINTION OF CONFLICTING STAKE HOLDERS

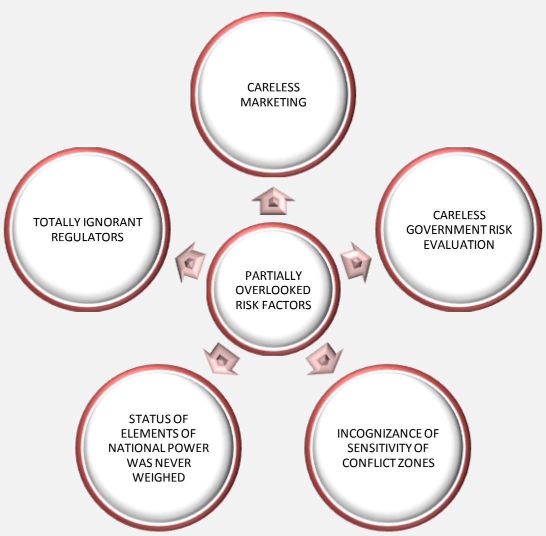
see what can be done to address economic concerns and social unrest in a way that will be acceptable to governments not a single government in a globalized economy, investors and the people. This is a challenging triumvirate odd combination of conflicting stake holders in a country's economy. The governments are definitely under pressure from all three. Third one being **the governments**!

However, one fails to understand why the heads of economically troubled governments have so far overlooked the most sensitive risk factors that are clearly visible now.

THE SUCCESS AND FAILURE OF REGULATORS, BANKERS AND FINANCIAL INSTITUTIONS

It is now a known fact that the products introduced by banks and financial institutions with the approval and support of the regulators were carelessly packaged and marketed in view of the high margins of return and the principle of controversial fractional banking artificially covering the potential risk if that

PATH TO DOOMSDAY AND THE CATALYSTS



was understandably envisioned at that time. Governments' vulnerability, even after carefully documented country risk evaluation, left much room for desired caution that was not factored in. The fallout of war on terror in and around sensitive resource rich countries and regions was also not taken into consideration in consultation with the military analysts. The well researched and carefully developed post-war scenarios by the top ranking think tanks of global repute were not considered, discussed and appropriately weighed in ShockWave Simulations.

Niall Ferguson in his Niarchos lecture on "Fiscal Crises and Imperial Collapses: Historical Perspectives on Current Predicaments" at Preston Institute for International Economics, Washington DC in May 2010 explains the situation in first nine slides saying *"We are witnessing a debt explosion in the developed world with the power to scare the governments into emergency action. Such crises are nothing new – They are as old as the bond market.* ***War and revolution are the traditional causes of crisis****. A pattern consistently to be found for more than a century. Unlike lightening, they tend to strike the same place twice – Latin America, Central, Eastern and Southern Europe, and the Middle East. But advanced economies are not exempt. It happens to best of us."* Then like Nouriel Roubini he lists six reasons for the crises: *"Excessive debt, excessive interest payments, excessive reliance on foreign capital, economic weakness, political weakness and irrational exuberance,"* concluding, **"some people never learn no matter how often it happens"** adding six theoretical ways out: *"a higher growth rate of GDP; a lower interest rate on the public debt; a bailout, meaning either a current transfer payment or a capital transfer from abroad; fiscal pain, meaning an increase in taxes and / or a cut in public spending; increased recourse to seigniorage (revenues from monetary issuance) by the central bank; Default, including every form of non-compliance with the original terms of the debt contract, including repudiation, standstill, moratorium, restructuring, rescheduling of interest or principal payment etc.*" striking out the first three and emphasizing the last three. In his next slide he divides the states into Cutters, Printers and Defaulters: *"**CUTTERS** are few and far between – only Britain 1815-1914 reduced debt-burden exclusively through budget surpluses, lower interest rates and higher growth. And Britain had the advantage of the industrial revolution; **PRINTERS** with monetary sovereignty and own currency debts; and **DEFAULTERS** with limited monetary sovereignty and foreign currency debt."*

NIALL FERGUSON'S THREE LESSONS OF HISTORY

What do governments **NOT*** do with world war size debt burden

- Slash expenditure on entitlements
- Reduce marginal tax rates on income and corporate profits to stimulate growth
- Raise taxes on consumption to reduce deficits
- Grow their way out without defaulting or depriciating their currencies

- *One exception Britain: 1815-1913

What do governments **USUALLY** do with world war size debt burdens

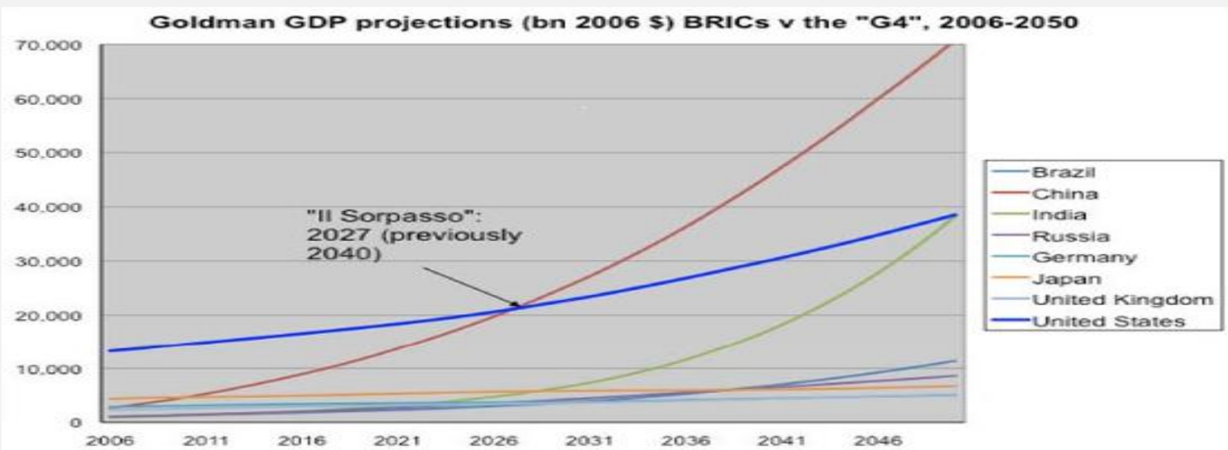
- Oblige central bank and commercial banks to hold government debt
- Restrict overseas investment by firms and citizens
- Default on committments to politically weak groups and creditors
- Condemn bond investors to negative real interest rates

What are the geopolitical consequences of crises of public finance

- In fiscal stabilizations, discretionary military spending is the first casualty
- In cases of default on external debt, conflicts with creditors can arise
- In cases of currency depriciation, reserve currency status can be lost to a rising rival

Niall Ferguson: "Fiscal Crises and Imperial Collapses: Historical Perspectives on Current Predicaments"

WHEN THE GOVERNMENTS IGNORE THE LESSONS THIS IS WHAT HAPPENS



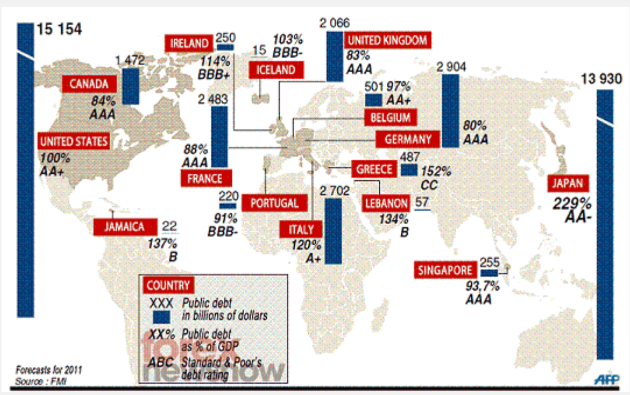
CONCLUSION

This background information and the way it needs to be looked at clearly indicates where the countries facing economic crisis, their governments, regulators, banking and financial institutions, big corporations and the people stand, what they are doing and what is expected to happen. Even after that it is surprising to note that they, except the people, are not slightly disturbed or show any sign of ***real*** anxiety for being silent partners and invisible catalysts in creating a global economic mess. Why is it so? Now, looking for an answer to that, one comes to a very important aspect of the economic crisis that has been knowingly or unknowingly and intentionally or unintentionally neglected or overlooked so far.

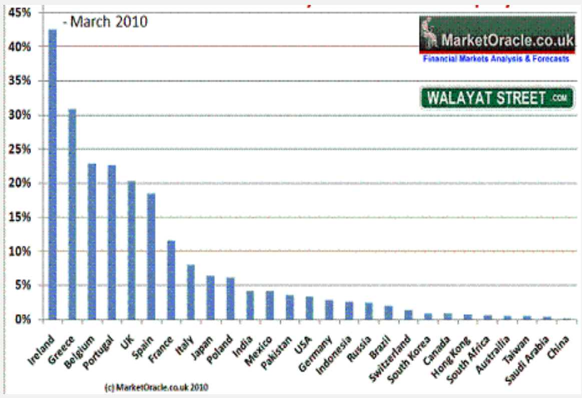
The cleverly engineered or accidently surfaced second Oil Price ShockWave came to the joyous rescue of the big banking and financial institutions mildly hurting them initially in two and heavily benefitting them in three ways. Oil Price ShockWave had created big holes in the domestic and commercial consumers' pockets and balance sheets respectively. Oil imports bills of non-oil producing countries sky rocketed and their current account and budget deficits became unmanageable.

The domestic and commercial consumers and governments had to be either rescued by rescheduling their debt or condemned as defaulters. These were two ***"mildly"*** hurting factors in view of the fact that Oil Price ShockWave did not only create big holes in the pockets, balance sheets and government

WORLD'S MOST INDEBTED COUNTRIES

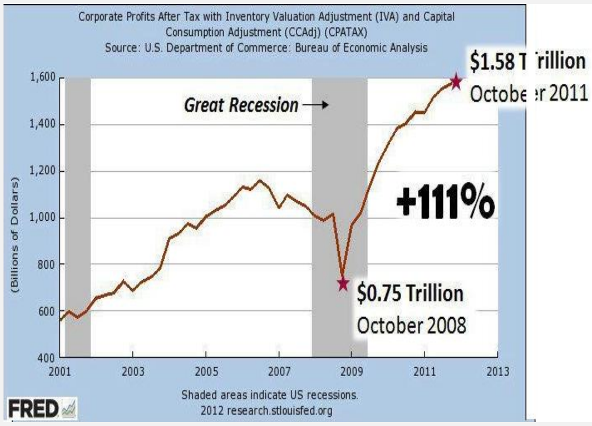


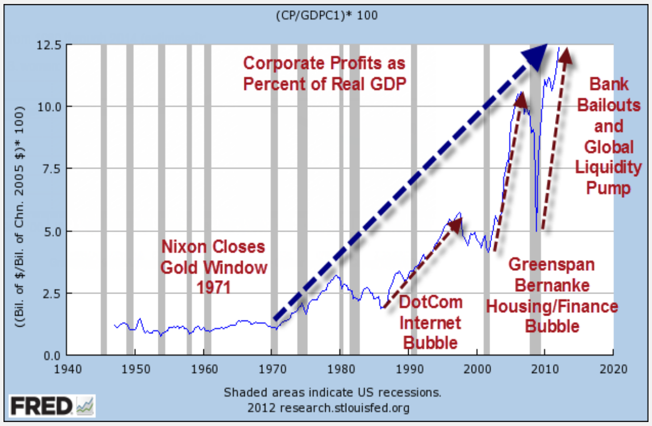
COUNTRY % RISK OF BANKRUPTCY



budgets it had added to the higher than planned revenues of oil producing countries, increase in technically engineered high profit margins of the big banks and corporations due to increase in the prices of everything from a needle to an air-ticket and government's demand for more loans from

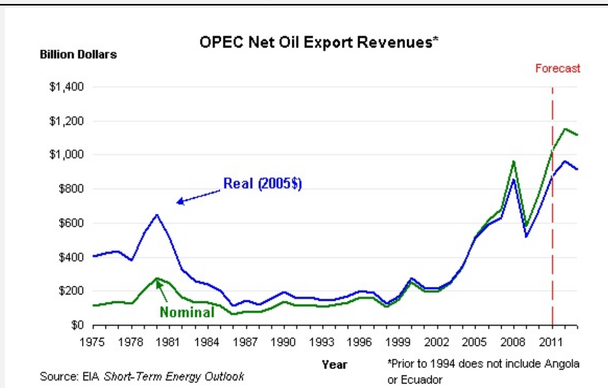
CORPORATE PROFITS MORE THAN DOUBLED





commercial banks at much higher interest rates. *"The global banking industry,"* according to a McKinsey Annual Review on the Banking Industry "The State of Global Banking: In Search of Sustainable Model" in September 2011 *"staged a sharp recovery in 2010, sustained into the first half of 2011, with revenues reaching an all-time high and profits nearly double their 2009 level. Yet most, though not all, of the good news came from emerging markets. Even before the recent market turmoil, the performance of developed market banks continued to lag pre-2008 levels."* Also, the 35% estimated earning of $1,154 billion of net oil export in revenues in 2012 will ultimately land in big banks and find its way to emerging markets through financial institutions making them more profitable. This is learnt from the outcome of the first Oil Embargo ShockWave.

OPEC COULD EARN $1,154 BILLION OF NET OIL EXPORT REVENUES IN 2012: **A 35% increase since 2009!**



OPEC Net Oil Export Revenues

Country	Nominal (Billion $)				Real (Billion 2005$)			
	2010	2011	2012	Jan-May 2011	2010	2011	2012	Jan-May 2011
Algeria	$53	--	--	$28	$47	--	--	$24
Angola	$56	--	--	$28	$49	--	--	$24
Ecuador	$8	--	--	$4	$7	--	--	$4
Iran	$73	--	--	$38	$64	--	--	$33
Iraq	$50	--	--	$28	$44	--	--	$24
Kuwait	$60	--	--	$33	$53	--	--	$29
Libya	$44	--	--	$9	$39	--	--	$7
Nigeria	$65	--	--	$36	$57	--	--	$31
Qatar	$37	--	--	$23	$33	--	--	$20
Saudi Arabia	$225	--	--	$125	$198	--	--	$108
UAE	$67	--	--	$39	$59	--	--	$34
Venezuela	$41	--	--	$24	$36	--	--	$21
OPEC	$778	$1,034	$1,117	$416	$685	$882	$935	$358

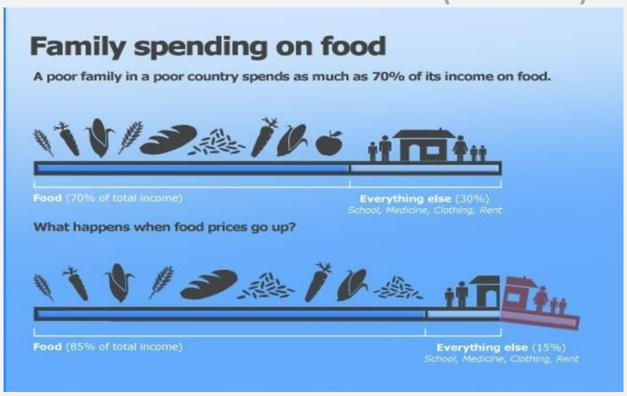
Based on projections from the EIA's May 2012 Short-Term Energy Outlook (STEO)

Was it an economic earthquake the ripples of which are felt even today and consumers and governments both are struggling without results to protect themselves from its fall out or blessing in disguise for big banks and corporations? If it was not either of the two then why did the regulators and banking and financial institutions had failed to see it coming and precisely measure the expected fallout with acceptable plus or minus margin? Even if they had done that why they did not declare the actual outcome of their exercise and warn the governments and the people? On top of that the regulators were also either unaware of the developments or pretending to be unaware. Why the people and the governments were and are trapped and what was and is still the way out?

The working class and the governments were badly trapped and seriously hurt for two reasons:

Understandably, the majority of employed workers has a fixed monthly income. The real carry home net salaries of fixed income groups were significantly decreased as a consequence of across the board impact of Oil Price ShockWave and they had no choice but to either cut down their essential monthly expenses or default on their bank loans. According to a World Food Program's Food Price Rollercoaster between January 2008 and July 2012 a poor family's income has decreased and food spending has increased from 70% of its income to 85% leaving them with only 15% money to meet all other expenses like schooling, clothing, medicine and rent.

FAO's FOOD PRICE ROLLERCOASTER (2008-2012)



FAO Food Price Index hits record high. Naturally people came out to protest in dozens of the countries. Countries introduced export bans. Number of hungry people crossed one billion mark for the first time.

"Whereas in years past, it's been weather that has caused a spike in commodities prices" Lester Brown in his article, "The Great Food Crisis of 2011," published in Foreign Policy magazine on January 10, 2011 maintains, *"now it's trends on both sides of the food supply/demand equation that are driving up prices. On the demand side, the culprits are population growth, rising affluence, and the use of grain to fuel cars. On the supply side: soil erosion, aquifer depletion, the loss of cropland to nonfarm uses, the diversion of irrigation water to cities, the plateauing of crop yields in agriculturally advanced countries, and -- due to climate change -- crop-withering heat waves and melting mountain glaciers and ice sheets. These climate-related trends seem destined to take a far greater toll in the future."* Other important issues of serious concern listed by Lester Brown are *food riots, annual food inflation rate, doubled world population since 1970, addition of 80 million people each year, 3 billion people moving up the food chain, rise in meat, milk and egg consumption in fast-growing developing countries, the massive U.S. investment in ethanol distilleries, plant based diesel oil, the*

clearing of rain forests in Malaysia and Indonesia for palm oil plantations, intensified soil erosion, aquifer depletion, falling water tables, shrinking irrigated area and backlog of untapped technologies, conversion of cropland to nonfarm uses, suburban sprawl, industrial construction, paving of roads, highways and parking lots, rapid industrialization, fast growing cities and competition for irrigation water, the rising temperature, melting of mountain glaciers.

THE MESSAGE THAT IS THE LAST WORD TOO

"The current surge in world grain and soybean prices and in food prices more broadly," Lester Brown warns, *"is not a temporary phenomenon.* ***We can no longer expect that things will soon return to normal****, because in a world with a rapidly changing climate system there is no norm to return to,"* concluding, *"****it is no longer conflict between heavily armed superpowers****, but rather spreading food shortages and rising food prices -- and the political turmoil this would lead to -- that threatens our global future.* ***Unless governments quickly redefine security and shift expenditures from military uses to investing in climate change mitigation, water efficiency, soil conservation, and population stabilization, the world will in all likelihood be facing a future with both more climate instability and food price volatility. If business as usual continues, food prices will only trend upward."***