The Fronteira Post
Economic Policy & Financial Markets

February 04, 2008

Global Financial Crisis: Nature, Origin and lessons for Nigeria's Monetary Policy[1]

- Martin Oluba Ph.D., DBA[2]

Some foundations of macroeconomic instability: The Trilogy

In his path breaking book on economic principles in 1871, Carl Menger declared that: "All things are subject to the law of cause and effect. This great principle knows no exception, and we would search in vain in the realm of experience for an example to the contrary"[3]. Even the natural laws support this notion whose reality is copiously found in human purposive actions towards satisfying his/her self interest. The problem starts when there is confusion regarding which is the cause and which is the effect. Perhaps most errors in policy making have originated from misinterpreting the effect (secondary manifestation) as a cause (primary force). It is therefore in appreciation of this reasoning that Hazlitt noted that "The art of economics consists in looking not merely at the immediate but at the long effects of any act or policy; it consists in tracing the consequences of that policy not merely for one group but for all groups"[4]. There is no other place that these statements make more meaning than in evaluating the actions of governments and of course the monetary (and other financial market) authorities. In most cases these actions are manifested in the trio of inflationary booms, moral hazards and market interference.

Historically, governments are usually short of revenue to meet its set targets. But in spite of the fact that they do not have the money to carry out these objectives, they still forge ahead with executing the projects. There are however lots of motivations for such actions whose size in turn varies with socio-political contexts. Typically they may not want to raise taxes because of its unpopularity. Tax revenue involves collection costs and generates consumer resistance, which may be substantial (Burgess and Stern, 1993)[5]. The options left become those which create inflationary booms: borrow from the banks, print more money, issue bonds etc. These have been the routes to deficit financing. In the extreme cases such as where government prints money, people do not have to pay any taxes but ultimately, the value of the currency in their hands would have been reduced in some ways. This is however not very apparent because inflationary consequences take place in a step-wise mode and not in the popularly misleading notion that it is an increase in general price level. Consequently the magnitude of distortions in relative prices is not same across board. This did not start today. "Before paper money, governments inflated by diminishing the precious metal content of their coinage. The ancient prophet Isaiah reprimanded the Israelites with these words: 'Thy silver has become dross, thy wine mixed with water.' Roman emperors repeatedly melted down the silver denarius and added junk metals until the denarius was less than one percent silver. The Saracens of Spain clipped the edges of their coins so they could mint more until the coins became too small to circulate. Prices rose as a mirror image of the currency's worth"[6]. Thus when we begin to look at the rise in prices as the cause of the inflation and the eventual distortion, we begin to miss the point. Always and everywhere money is the root of inflation.

The modern banking system has however equipped the central bank and the commercial banks with the capacity to provide these needed funds to government. The central bank has the monopoly to issue currency notes. It is equally a banker to the government. Let us however concentrate on the role of the monetary authorities in the process of raising these funds to meet government's financing requirements. When bank expands money supply (grants new loans or prints more money) in order to meet government's fiscal deficits, the interest rate drops. We start by assuming that there were no artificial injection of money by the monetary authorities into the loan market such that the rate that clears the market will be based on the supply of real savings by economic agents pursuing their personal interests. Such rate can ideally be regarded as the natural rate or true market loan rate. The market rate

---

[1] **Paper presented at the strategy retreat of the Monetary Policy Department of the Central Bank of Nigeria held at Asaa Pyramid Hotel, Kaduna on January 30, 2009.**

[2] *Martin Oluba N. PhD, DBA is the President/CEO of ValueFronteira Limited www.valuefronteira.com. He is also an adjunct professor of economics at the Swiss Management Center, Switzerland and Austria and adjunct mentor (faculty), research methods and doctoral dissertations at the Northcentral university, Arizona, USA. You may also visit his personal website at www.martinoluba.com for more on his views on issues on Nigerian economy.*

[3] Carl Menger (1871). 'Principles of Economics', (the Grundsätze). http://cepa.newschool.edu/het/profiles/menger.htm

[4] Henry Hazlitt (1952). 'Economics in One Lesson' Special Edition for The Foundation for Economic Education

[5] Burgess, Robin and Nicholas Stern (1993), 'Taxation and Development', Journal of Economic Literature, 31-2, 762-830.

[6] Lawrence W. Reed (2008). 'Inflation is Still With Us'. http://www.mackinac.org/article.aspx?ID=9187 Posted January 21.

may approximate a natural rate here in which economic agents voluntarily lend and borrow without any artificial injection of money. New money notes which came out of nothing except the statutory power of the law will naturally depress the actual interest rate below the natural rate (depending on the scale of this monetary injection) and give the impression that economic agents are now voluntarily supplying more money to the loan market out of their savings. This triggers increased borrowing of these hot money for investment (long-term) purposes. This boom can be sustained for as long as there is continued outpouring of more paper money or increases in actual real savings (productivity). But any slight contraction or correction of this process will invariably have a reverse effect and as such long-term investments which are caught up in the process will become bad. Jesus Huerta de Soto (2008) put it more succinctly "In fact, today there is no doubt about the recessionary consequence that the monetary shock always has in the long run: newly created loans (of money citizens have not first saved) immediately provide entrepreneurs with purchasing power they use in overly ambitious investment projects (in recent years, especially in the building sector and real-estate development). In other words, entrepreneurs act as if citizens had increased their saving, when they have not actually done so. Widespread discoordination in the economic system results: the financial bubble ("irrational exuberance") exerts a harmful effect on the real economy, and sooner or later the process reverses in the form of an economic recession, which marks the beginning of the painful and necessary readjustment. This readjustment invariably requires the reconversion of the entire real productive structure, which inflation has distorted"[7].

Government and the central bank also try to insulate the financial system from risks by exercising its role as a lender of last resort. Typically the ways and manners in which this shield is provided is in turn consistent with the inflationist process described above: pump more

[7] Jesus Huerta de Soto (2008). 'Financial Crisis and Recession'. Mises Daily Article. http://mises.org/story/3138 Posted on 10/6/2008

money. Through consistent monetary injections, the central bank makes sure that the banking system has enough liquidity and that banks will not be bankrupt. The banks knowing therefore that even if they deal recklessly with customers' funds that more money can cheaply be obtained tend to stay on the reckless path. Moral hazards represent the possibility of an economic agent which is insulated from risks to behave in a way different from how it ought to behave because it does not bear the full consequences of its actions. That way, government and the central bank orchestrate moral hazards as they become underwriters of risky investments. Banks have become more reckless in their dealings as a result of this. It was precisely this type of thinking that heightened the subprime lending crises. These effects cumulatively undermine the case for free markets.

Not only does government's orchestration of moral hazards subtly undermine free markets, in almost all instances government use regulations to directly obstruct market process. That is why some economists believe that insufficient regulation is the cause of many financial and economic problems. Because of this line of thinking, government increasingly offers more regulation. Market failure becomes the ready reason. The market however does not fail as it most efficiently allocates resources and thus enhances productivity. Free market economies raise macroeconomic productivity, income and living standards. Constraining the market from functioning freely equally hinders the possibility of this well-being. The more government interferes in the market, the more the inefficiency in resource allocation. Accordingly, "there is no objective standard by which government is justified in intruding on the decisions of sovereign individuals making their own decisions in free markets. There *is* a logical standard for the proper amount of government interference. That standard is *none, no interference whatsoever*"[8]. But even if we have to lower this standard at all, by what level should it be? Milton Friedman, a foremost neoclassical advocate of relatively free market observed that "the market comes close to meeting the standard efficiency criteria; little government intervention is needed to 'correct' it"[9].

[8] Michael S. Rozeff (2006) 'Why Market Failure Fails' Posted on July 17, 2006 http://www.lewrockwell.com/rozeff/rozeff79.html

[9] The Mises Review (2006). 'Markets Don't Fail! by Brian Simpson' 22 Sep. *https://mises.org/misesreview_detail.aspx?control*

Global Financial Crises: A Century Review

There have been quite a few global crises in the last century. As in every robust investigation, it will be important to examine their nature and origins so that we can most meaningfully explain the 2008 crisis within an appropriate context. Four major crises have been identified. These are (a) the Great Depression (b) Crash of 1987 (c) Crisis of the 1990s and (d) the 1997 Asian Financial Crisis. There is however the dot com crisis which is a fall out of the crisis of the 1990s.

The United States no doubt experienced a boom in the 1920s[10][11]. From 1921 to 1929 the economy grew from its lowest ebb to a high of 6%. This was phenomenal when compared with the country's then average long-run growth rate of 3%. (see figure 1 and Table 1 below). Although this was a boom, it might have as well not been sustainable if as already explained the growth was not being driven by real savings. Although technological change could push real growth, however such entrepreneurial value creation can be destroyed over a long time if it is driven by hot money. The post world-war I industrial exploits had huge effects in several industries such as automobiles, households appliances etc and supposedly would have put pressure on interest rates because of the strong loan demand, however the contrary was the case.

Table1: Industrial Unemployment Rates

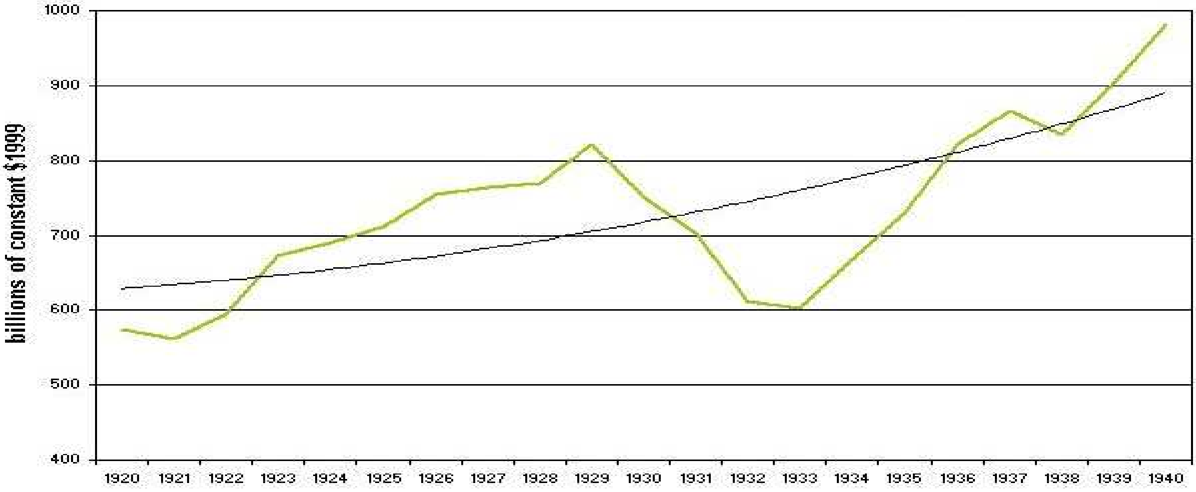
Country	1921 - 29	1930 -38	Average Rate	Difference	Ratio of Difference to Average
United States	7.9	26.1	17	18.2	1.07
United Kingdom	12	15.4	13.7	3.4	0.25
France	3.8	10.2	7	6.4	0.91
Germany	9.2	21.8	15.5	12.6	0.81

Source: Eichengreen and Hatton (1998)

[10] Roger W. Garrison (1999). 'The Great Depression Revisited'. *The Independent Review, v.III, n.4, Spring 1999, ISSN 1086-1653, Copyright © 1999, pp. 595–603*

[11] Thomas E. Hall and J. David Ferguson (1998), 'The Great Depression: An International Disaster of Perverse Economic Policies' Ann Arbor: University of Michigan Press, 1998. P.17

Figure 1: United State GDP (1920 – 1940)



Source: Wikipedia (Great Depression)

"Actual movements in interest rates and changes in credit conditions, showed that downward pressure was stronger than upward pressure: the corporate-bond rate and the commercial-paper rate declined throughout the boom. The supply of credit evidently outpaced the demand for it. However, the credit was being supplied not by market participants who had suddenly become big savers but by a central bank that had just turned its attention from financing a war to fostering prosperity in a peacetime economy" [12]. Some analysts focusing on the climaxing of the financial crisis of that time marked by the black Tuesday or stock market crash of 1929 has posited that it was the reserve boards restrictive monetary stance in response to the stock market boom that was the cause of the initial economic slow down which resulted in a crash. Roger Garrison (1999) has however proved that "if the stock prices in the late twenties were actually anchored in the fundamentals, then the (uncalled-for) restrictive monetary policy is rightly seen as the cause of the downturn. If, however, the speculative excesses were themselves the result of overly favourable credit conditions maintained by the Federal Reserve, then to attribute the downturn to subsequent monetary restrictions is, at best, misleading" [13].

Irving Fisher's debt deflation argument is also quite instructive[14]. According to Wikipedia, "Irving Fisher argued that the predominant factor leading to the Great Depression was over indebtedness and deflation. Fisher tied loose credit to over-indebtedness, which fuelled speculation and asset bubbles. During the Crash of 1929 preceding the Great Depression, margin requirements were only 10%. Brokerage firms, in other words, would lend $9 for every $1 an investor had deposited. When the market fell, brokers called in these loans, which could not be paid back. Banks began to fail as debtors defaulted on debt and depositors attempted to withdraw their deposits en masse, triggering multiple bank runs. Government guarantees and Federal Reserve banking regulations to prevent such panics were ineffective or not used" (source: Wikipedia: Great Depression). Needless to say that the depression which started in the United States, snowballed into a global crisis.

Although it did not have wider global impacts, the crash of 1987 deserves yet another attention. For five years staring from 1982, the market had been on a sustained bull that saw the Dow rise from 776 points in August 1982 to a high of 2,722.42 points in August 1987. What sustained this bullish market? Was it a consequence of the fundamentals? According to Rothbard (1988) "to put it simply: the reason for the crash was the credit boom generated by the double-digit monetary expansion engineered by the Fed in the last several years. For a few years, as always happens in Phase I of inflation, prices went up less than the monetary inflation. This, the typical euphoric phase of inflation, was the "Reagan miracle" of cheap and abundant money, accompanied by moderate price increases. By 1986, the main factors that had offset the monetary inflation and kept prices relatively low (the unusually high dollar and the OPEC collapse) had worked their way through the price system and disappeared. The next inevitable step was the return and acceleration of price inflation; inflation rose from about 1% in 1986 to about 5 % in 1987. As a result, with the market sensitive to and expecting eventual reacceleration of inflation, interest rates began to rise sharply in 1987. Once interest rates rose (which had little or nothing to do with the budget deficit), a stock

[12] Roger W. Garrison (1999). 'The Great Depression Revisited'. *The Independent Review, v.III, n.4, Spring 1999, ISSN 1086-1653, Copyright © 1999, pp. 595–603*

[13] Roger W. Garrison (1999). 'The Great Depression Revisited'. *The Independent Review, v.III, n.4, Spring 1999, ISSN 1086-1653, Copyright © 1999, pp. 595–603*

[14] Wikipedia. Great Depression. http://en.wikipedia.org/wiki/Great_Depression

market crash was inevitable. The previous stock market boom had been built on the shaky foundation of the low interest rates from 1982 on"[15].

Figure 2: Dow Jones Industrial Average

Source: http://www.stock-market-crash.net/1987.htm

A review of the causes of the Japanese asset bubble which started 1986 and started bursting from the late 1990s can as well throw further light on the truth of this reasoning. According to Wikipedia, "the Japanese asset price bubble was an economic bubble in Japan from 1986 to 1990, in which real estate and stock prices greatly inflated. The bubble's collapse lasted for more than a decade with stock prices bottoming in 2003, until hitting an even lower low in 2008 amidst a global recession"[16]. Figure 3 shows the interest rate on loans being consistently depressed because of expansions in money supply (see figure 4).

Figure 3: BOJ Discount Rates (1980 – 1990)

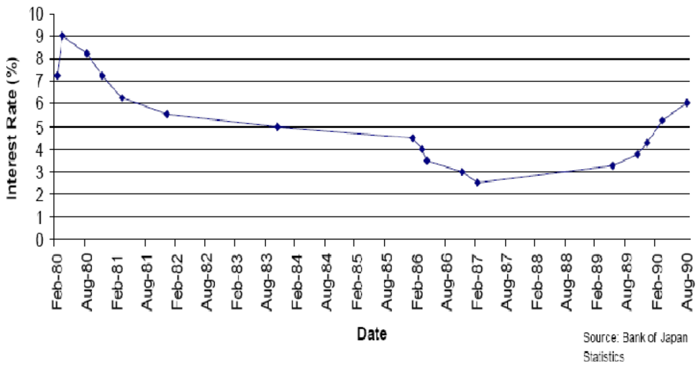
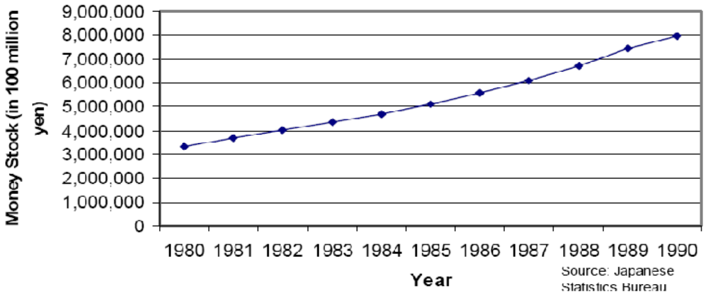


Figure 4: Japanese Monetary Stock (M3+CD's) 1980 - 1990



"What are the implications of this data? Japan's bubble was fuelled by cheap and super easy credit. Japan's gross consumer debt increased seven-fold from 9 trillion yen in 1979 to 67 trillion in 1991. Per capita consumer debt reached $2985 in Japan, just below the $2915 of the US. Between 1985 and 1990, Japanese industrial companies raised some 85 trillion yen ($638 billion) through the stock market, at what were essentially free financing levels, fuelling the biggest spending spree since 1945. These were companies that made up the real industrial economy. In terms of the stock and real estate markets, the numbers were even more staggering. This is what is described as the unstable liquidity triggered boom. At the height of the bubble the stock market's capitalization made up 42% of the entire global market's capitalization, when in 1980 it had made up a comparatively meager 15%; Japan's market worth had increased to 151% of GNP, from 29% in 1980. Land values in 1990, even after the stock market crash were still five times Japan's GNP. Japan's lax monetary policy led it to become the marginal supplier of world credit, acting as the lender and purchaser of last resort. So why did Japan lower its interest rates between 1986 and 1987 to 2.5%, a historical low? Japan's central bank took on a loose monetary policy partially at the behest of the US government which convened the G7 at the Louvre Accord in 1987 in order to stabilize international currency markets and halt the slide of the US dollar (20). As you'll note in the earlier graph of interest rates, Japan's cut to 2.5% coincided with the Accord in February of 1987"[17].

Let us again examine the Asian financial crisis of 1997. This had its root in Thailand and spread across Southeast Asia. It affected several currencies namely the ringgit (Malaysia), dollar (Singapore, Taiwan), peso (Philippine), rupiah (Indonesia). Thailand had pegged its currency (Thai baht) to the United States dollar.

[15] Murray Rothbard (1988). 'Nine Myths about the Crash (January)'. Ludwig von Mises Institute. http://mises.org/Econsense/ch48.asp
[16] http://en.wikipedia.org/wiki/Japanese_asset_price_bubble

[17] Benjamin Weingarten (). 'The Cause of Japan's Boom and The Reasons for Its Prolonged Bust'. http://mises.org/journals/scholar/weingarten.pdf

However the baht became much weaker necessitating increasingly investor flight to the dollar. In order to maintain the pegged exchange rate, Thailand's central bank had to spend over US$20 billion. However, the supply of baht exceeded the market's demand for it and the government's intervention only delayed and exacerbated the crisis. "On 30 June 1997, Prime Minister Chavalit Yongchaiyudh said that he would not devalue the baht. This was the spark that ignited the Asian financial crisis as the Thai government failed to defend the baht, which was pegged to the U.S. dollar, against international speculators"[18]. In less than two months, the currency lost over 20% against the dollar. "As the crisis spread, most of Southeast Asia and Japan saw slumping currencies, devalued stock markets and other asset prices, and a precipitous rise in private debt"[19]. Frank Shostak (1999) put it more succinctly in these words: "But if Asia's economic policy makers are to witness a long-term recovery, they will first need to reverse the interventionist policies that have distorted the real cost of capital in the region and depleted the wealth of Asian consumers and investors. Contrary to popular thinking, it was the overly loose monetary policies of Asia's central banks that led to the current crisis"[20].

The 2008 Global Financial Crisis: Nature and Origin

Equipped with information on the underlying causes of major global financial crises in the past one century, do we still need to discuss the nature and origin of the current (2008) global financial crisis? We start by noting that the crises took place largely at those sectors where there were some kinds of guarantees from the government and the monetary authorities that they would not be allowed to fail – precisely the big Wall Street banks, and brokerage houses. These institutions consequently took the highest risks and of course the heaviest mal-investments particularly in the specific investment areas where there are chances that government would intervene with bailouts. This has as described above triggered reckless behaviour which as we know is not consistent with entrepreneurial life style. But much more entrepreneurial mistakes have been financed by the approximately two decades of United State's reckless policy of monetary expansion. As described above, this altered investor preferences and created imbalances in the real economy. The reckless monetary policy of the United States did create a wide discrepancy between consumption and production evidenced in its persistent trade imbalances. Simply expand money supply, reduce interest rates, create more credits, and expand consumption and of course more imports. Thus although massive introduction of new technologies and entrepreneurial innovations had increased productivity in the past decade it could not result in significant reductions in the prices of goods and services because of expansions in money and credit supply[21].

Jesus Huerta de Soto (2008) remarked that "the expansionary cycle that has now come to a close was set in motion when the American economy emerged from its last recession in 1992 and the Federal Reserve embarked on a major artificial expansion of credit and investment, an expansion unbacked by a parallel increase in voluntary household saving. For many years, the money supply in the form of banknotes and deposits (M3) has grown at an average rate of over ten percent per year (which means that every six or seven years the total volume of money circulating in the world has doubled). The media of exchange originating from this severe fiduciary inflation have been placed on the market by the banking system as newly created loans granted at extremely low (and even negative in real terms) interest rates. The above fuelled a speculative bubble in the shape of a substantial rise in the prices of capital goods, real-estate assets, and the securities that represent them and are exchanged on the stock market, where indexes soared" [22]. Having coasted successfully on a boom for over a decade growth was so to say a function of money/credit supply and not credit from real savings. As a matter of fact it became a constitutional matter to socialize the losses of risky mortgages. " … mortgage lenders didn't wake up one fine day deciding to junk long-held standards of creditworthiness in order to make ill-advised loans to unqualified buyers." CRA allowed "regulators to punish banks that failed to 'meet the credit needs' of 'low-income, minority, and distressed neighborhoods.' … As long as housing prices kept rising, the illusion that all this was good public policy could be sustained. But it didn't take a financial whiz to recognize that a day of reckoning would come. "What does it mean when Boston banks start making many more loans to minorities?" I asked in this space in 1995. "Most likely, that they are knowingly approving risky loans in order to get the feds and the activists off their backs … When the coming wave of foreclosures rolls through the inner city, which of today's self-congratulating bankers, politicians, and regulators plans to take the credit?' … A manual issued by the Federal Reserve Bank of Boston advised mortgage lenders to disregard financial common sense. "Lack of credit history should not be seen as a negative factor," the Fed's guidelines instructed. Lenders were directed to accept welfare

[18] http://en.wikipedia.org/wiki/Asian_crisis
[19] http://en.wikipedia.org/wiki/Asian_crisis
[20] Frank Shostak (1999). 'Asian Recovery?' Mises Daily Article http://mises.org/story/240. Posted on 6/7/1999

[21] Jesus Huerta de Soto (2008). 'Financial Crisis and Recession'. http://www.lewrockwell.com/orig9/desoto1.html
[22] Jesus Huerta de Soto (2008). 'Financial Crisis and Recession'. Mises Daily Article. http://mises.org/story/3138 Posted on 10/6/2008

payments and unemployment benefits as "valid income sources" to qualify for a mortgage. Failure to comply could mean a lawsuit"[23]. In effect what has created the problem is the government intervention which in trying to produce mass housing has done so by using capital created out of nothing. What this means in turn is that had it not been for the policy of easy money, many unjustified investments would otherwise not have taken place. Thus those who clearly do not have the capacity to borrow and own houses would not do that. At worse they could borrow to rent instead of outright purchase. This credit binge equally discouraged savings.

Figure 5: Fed's Federal Fund rate

The Economic Times of India relayed the underlying causes very aptly: "the current financial turmoil is rooted to the sub prime crisis. During boom years, mortgage brokers enticed by the lure of big commissions, talked buyers with poor credit into accepting housing mortgages with little or no down payment and without credit checks. Banks and financial institutions often repackaged these debts with other high-risk debts and sold them to world-wide investors creating financial instruments called CDOs or collateralised debt obligations. The serious sub prime mortgage crisis began in June of 2007 when two Bear Stearns hedge funds collapsed. Federal Reserve Bank and European Central Bank dumped $100-billion in liquidity into the system that calmed the market down for a short period. However the sub prime crisis continued to be solid as long as the housing market continued to escalate and interest rates didn't go up"[24]. The key questions here are: why were the brokers enticed with big commissions to market/get risky clients? The answer is that these banks have the constitutional backing to massively extend large sums of money credit that is not backed by the real savings of economic agents. Consequently the costs of loans are depressed and make it even more attractive to the risky prospects.

Yet little did the government, banks and the regulators worry about how profitable it is to lend to credit risky prospects.

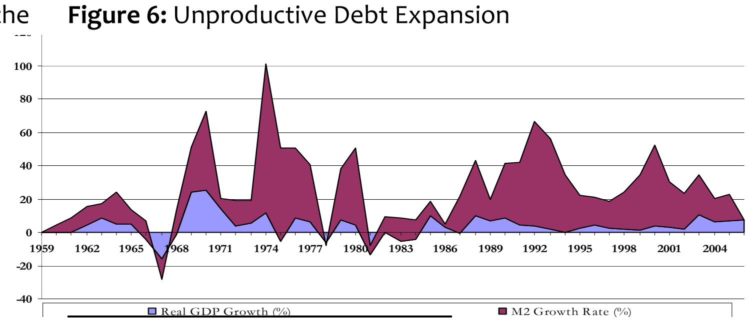
From the above analysis, we could easily witness the trilogy in action: inflationary boom, moral hazards and market intervention. Always, these are the forces that trigger enormous instability in the macroeconomy.

Putting Nigeria in Context: Our Monetary Policy Disposition

The efficacy of monetary policy in Nigeria has been historically undermined by fiscal dominance as well as persistent liquidity overhang which in part derive from the former. Fiscal expansion is the major inducement to monetary expansion. Deficit budgeting appeared justified during the immediate post-independence era, largely because of the need then to expand the economy. This culture however became seemingly entrenched over time. In spite of the various stages of transformation which the framework for monetary policy management has been subjected to over the years these impediment have not abated. From here I copiously copy sections of my earlier article titled: Has Nigeria's Monetary Policies Truly Supported Sustainable Macroeconomic Performance?[25]

We use the growth rates of broad money supply as a proxy for monetary policy based on our earlier definition of monetary policy as concerned with the change in the quantity of money. We equally use the growth rate of output as a proxy for growth rate of demand for money. Recall that by exchanging the goods and services produced, one is in effect asking for money. Thus based on the classical barter relations, things of value exchange and money is no different. The GDP represents the monetary value of all goods and services produced within the economy and thus are a good measure of the true demand for money for real economic activities. Relating the growth in money supply (M2) to the growth in GDP gives us a picture of unproductive debt expansion i.e. money that is not backed by any real productive activity.

Figure 6: Unproductive Debt Expansion



[23] http://blog.mises.org/archives/008827.asp

[24] Global financial crisis, the journey so far. http://economictimes.indiatimes.com/Indicators/Global_financial_crisis_The_Story_so_far/articleshow/3507868.cms

[25] http://www.martinoluba.com/publications/articles/Has%20Nigerias%20Monetary%20Policies%20Truly%20Supported%20Sustainable%20Macroeconomic%20Performance.pdf

From figure 6 above it is evident that we have been living on an inflationary boom. Money has grown at a rate that is by far in excess of the growth of output and has left in its trail substantial heights of inflation. Most generally, inflation is a consequence of government spending policy and its financing. Government intervention brings about banks' credit expansion and inflation, and, when the inflation comes to an end, the subsequent depression-adjustment comes into play. Positive economic growth is primarily a consequence of falling rates of time-preference, which invariably results in the increase of share of saving and investment to consumption, as well as declining rate of interest. When the rate of interest drops because of the interference of government and the central bank which promote the inflationary expansion of bank credit and not necessarily because of lower time-preferences and higher savings, businessmen, react as they always would when the rate of interest falls. They invest more in capital and producers' goods. Previously seeming unprofitable businesses now seem profitable thus encouraging investments, particularly in lengthy and time-consuming projects, which previously looked unprofitable. The investors behave as they would when voluntary savings actually expanded prompting them to increase their investment in capital goods, industrial raw material, construction etc relative to the production of consumer goods. Entrepreneurs are glad to take advantage of the expanded credit and borrow - as the money is obtained at cheaper rates – to invest in capital goods. However, this borrowed credit is eventually expended on higher rents and wages. Naturally, the expanded business demand results in increased labour demands and labour costs. Eventually, these higher costs cannot be sustainably paid by the business men when the inflationary boom ends: they have made a false investment.

One important thing that emerges from our analysis is that the bulk of aggregate output growth from 1965 has been driven by monetary inflation with consequent impacts on investment through the medium of artificially lowered interest rates. These rates may not easily be widely and directly observed as such as a result of myriads of such effects across transaction types, sectors and across time. This accounts for the many occasions of depressions which have been observed. In the case of inflation, the impact is general although it does not affect all sectors, segments or sections of the economy at the same time, but the effect appears more general and will be difficult to be isolated. We carried correlation analysis between inflation and the growth rates of investment given three scenarios namely (a) same year that inflation occurs (b) a year after inflationary episodes and (c) two years after the recorded inflation. The reason for these amendments is based on the understanding that inflationary effects occur in a step-wise fashion and is not restricted to one-year but may actually extend to several years after the recorded inflation. This analysis is only an approximation as it is extremely difficult to meaningfully track the full effects of inflation particularly on investment behaviour. But using a simple assumption we examine at least partially how estimates of the changes in price levels are related with investments over the periods. (See table 2).

Table 2: Coefficients of Correlation between Inflation and Investment Growth

Period	Period Description	IG0	IG1	IG2
1960 - 1968	Pre-Oil Boom Era	0.2	-0.3	-0.6
1972 - 1978	Oil Boom Period	0.4	0.1	-0.4
1966 - 1969	War Years	0.8	0.5	-0.4
1981 - 1984	Period of Economic Crash	0.3	-0.4	0.9
1986 - 1993	Structural Adjustment Programme	0.3	-0.6	-0.3
1994 - 1998	Guided Deregulation	-0.7	-0.8	-0.4
1999 - 2003	Pre-NEEDS Era	0.7	0.0	-1.0
2003 - 2006	NEEDS Era	-0.5	0.3	

Where IG = Investment Growth; 0 = Same year inflation was officially reported; 1 = 1 year after inflation was reported; 2 = 2 years after inflation was officially reported.

These coefficients demonstrate clearly the inverse relationship between investment growth and inflation. Going by this analysis, two years after officially reporting inflation, it is expected that between 2000 and 2003 investment would decline almost by 100% of the increase in prices. For the same period, the effects on average may not have been fully felt in the first and second years. Basing our analysis mainly on IG2, we can observe that investment is quite sensitive to changes in prices. All coefficients save that of the period of the crash show very good inverse correlation of between 30% and 100%. In IG0, we see many positive correlation points which confirm the short-term inflationary booms. Thus within the first year of monetary expansion, investment appears to have grown. But same inflation which caused this seeming growth will account for the destruction of these investments few years down the line.

Very close relationship can be deciphered from the graph in figure 6. Whereas inflation occurs first and investment growth reacts, investment has reacted oftentimes more than proportionately to the rate of change in inflation after some period of time (which from the graph is clearly not corresponding to the period of official inflation report). This more than proportionate response is an indication of the extent to which the investor is misled in the occurrence of monetary inflation. The investor/entrepreneur, wrongly feels that the inflationary situation is a profit situation and consequently waits for some period before eventually changing his business orientation in more than proportionate times than the increase in prices. The level of this misguided perception is also what determines the level of collapse in investment and output. Since investments are sunk in periods of boom, the height of the loss will be positively correlated with the level of sunk costs/investment.

For instance, prior to 1974, broad money supply grew by 13.8% (1973). However, in 1974, through 1977, money supply grew by 89% (1974); 55.7% (1975); 41.5% (1976); and 34.5% (1997). The forced savings of this period and the consequent mal-investments that followed resulted in the depression of the 1978 with real output declining by about 6%. These periods also witnessed massive investment booms with investment/GDP ratio increasing from 26.8% (1974); 42.6% (1975); 52.4% (1976) and 55.2% (1977). Investment also grew in percentage terms rapidly from 2.6% (1974) to 50.3% (1975) and 33.8% (1976). However, the continued expansion of money supply which was sustained even after the depression of 1978 could not support continued investment growth afterwards. By 1978 investment fell by 27.5% and could not recover from this persistent collapse for close to a decade. Even as a share of income, investment continued to crumble. This situation was also worsened by the fall in oil prices in the international market which consequently severely affected the earning prospects of the country. So the buffer that protected the economy from the earlier depression was withdrawn with a resultant effect of sliding investment growth. In addition to poor earnings, and depleting reserves, government sustained its fiscal deficit posture thereby aggravating the conditions of credit creation out of thin air.

The process again was repeated in 1980 shortly after the depression when money expanded by 50% with a questionable recovery in which the growth rate was 13.5%. Investment as a share of GDP also responded by increasing from 34.7% in 1979 to 38%. Yet this was a case of misallocated resources. It appeared afterwards as if the cumulative impact of these misallocated investments could no longer be cushioned and the economy was thrown into a long depression from 1981 to 1984. Real GDP declined consistently for the next four years while investment growth was negative (declined) for a consecutive 6-year period. Investment declined at an average rate of 15% from 1981 to 1986. Its percentage share in the GDP also declined consistently from 43% in 1981 to about 12.8% in 1986. Following these developments, the government resumed deficit spending in 1982 with heightened alacrity. In 1982 the fiscal deficits were about 13% of the GDP.

Nigeria's Recent Financial Crises: Any Theoretical Confirmation?

Again, I cull a section of my article titled "The Nigerian Equity Market Crisis: the Causes, the Solutions"[26] to make up this section.

The crises currently faced by the Nigerian equities market are traceable to two primary causes: one is primary and derives from domestic monetary and financial policies such as the untimely reversal of the margin trading policy which halted the fuelling of the bull market as well as the consequent increased pressure on banks a few months from the halt of the policy to start recalling their funds; the increase in MPR from 9.50% to 10.5% and the increase in CRR from 2% to 4% all in a bid to curb the seeming excess liquidity which was also part of the underlying reason for halting the margin facility; the rumours of a CBN policy on the harmonization of banks' year end which triggered a desperation in the industry for fund mobilization which equally bid up the interest rates and made the money market even more attractive. The CBN had denied issuing any order halting margin trading. The second primary cause of the problem has two variants. The first variant is the response of the international investment community to the developments within the domestic financial market environment while the second is their reaction to developments in their own financial landscape.

When the global economy started to operate at the borderline of recession, investors and entrepreneurs generally scouted in desperate panic for alternative investment outlets and opportunities for better returns and minimization of losses. The Nigerian market which at the time was being driven by excessive bank credits following heavily engineered recapitalization became the coveted bride. For many of the banks with heavily skewed ownership structure the battle for maintenance of the existing ownership structure resulted in shades of financial engineering through the use of re-labelled customer funds and credits from colluding banks to finance the acquisition of trillions of shares. And through a second level of share price engineering at the stock market, ballooned and

26 http://www.martinoluba.com/publications/articles/Surviving%20the%20Nigerian%20Capital%20Market%20Crisis.pdf

manipulated prices created enough funds to repay creditors. And to further cover the trail, there was need for second and third rounds of capital raising exercises. Prices of equities continued to soar as if it would never recede. The capital world hailed the Nigerian market as one with the highest returns in the world; and one which equally offers huge opportunities for portfolio diversification in the face of the imminent depression in their markets. As a result, there were massive inflows of portfolio investments into the Nigerian stock market. Many foreign investment banks promptly set up offices in Nigeria in order to closely monitor and take advantage of the opportunities which the market offered. Earlier in 2006, following the central bank's appointment of 14 local banks to manage the country's foreign reserve, robust relationships developed between the foreign asset managers with which local banks were then mandatorily expected to work with. This relationship further created opportunities for entry into the Nigerian financial market.

There was however a series of domestic financial policy faux passes which invariably initiated a reversal of these inflows. The first was the Central Bank of Nigeria's decision to stop the then massive credit expansions which took place via bank lending for equities. The implication of this pronouncement was far-reaching as the hitherto seemingly endless upward price movement of Nigerian stocks, particularly the equities of the banks which were driven by the bank-credit-backed demand pressure, halted. Banks had sustained the equity market boom by using a combination of tactics – direct interventions through lending to stockbroking firms primarily to buy their (the bank's) shares - to sustain demand pressure on their stocks such that its prices continued to rise without corresponding appreciation on the underlying values. Although this was always known, the carmel's back was however broken when JP Morgan on its 12th May, 2008 report pointed out that more than 56% of the banks are overvalued while pointing out clearly that bank share prices have run well ahead of fundamentals and do not incorporate the numerous risks facing the sector from both the operational and macro-perspective. This triggered an increased drop in the holdings of bank shares particularly by these foreign investors who reckoned that the Nigerian market was indeed headed to experience exactly what other global markets were facing. True to that perception, the price slide which started since then has not stopped. The loss of confidence in the market was further strengthened when the Nigerian Stock Exchange declared that one week was going to be a week of price increases only! This foreclosed two categories of investors: those who have correctly anticipated the market correction and are awaiting prices to adjust to their correct underlying values before they purchase and those who have large volumes of shares but discover that they cannot easily dispose of them because of these rigidities. For the former group, who would buy at some low prices and wait for a rebound, they are deprived of that opportunity. Furthermore tolerance of such clear violation of fundamental market rules means that indeed they could wake up any day and be confronted by yet another measure that can possibly wipe off their profits. This anti-market decision was a prompt warning to foreign investors who heightened the pace of their fund withdrawals from the Nigerian market.

Be that as it may however, another reason for fund withdrawal by these foreign investment banks was the economic crises in their home country too which resulted in tremendous losses and required that they seek funds from wherever they could to service debts created by that situation. Withdrawals for this reason was however given fillip because of the already declining and un-cheery local market which could not correctly provide the required diversification for their weakening portfolio. If the stock market was not initially hurt by Nigeria's own monetary policies, lax bank supervision, anti-(equity)market regulations, it is most unlikely that the massive withdrawal of funds as was being alluded to would have taken place at the level at which it occurred. It is a historical fact that continents such as Asia benefitted immensely from opportunities arising from bad or less than auspicious economic conditions which occurred in the more developed world economies. Theoretically speaking too, investors when faced with risks of outright losses would be more interested in loss minimization or profit maximization where it is still possible. Thus if the Nigerian market had provided better real alternatives that would help diversify foreign investment portfolios which could equally result in substantial loss minimizations, the funds pull-out would not have been a large-scale affair. On the contrary, the Nigerian market would have served as a buffer under such emerging circumstances.

Conclusion: What are the Lessons for Nigerian Monetary Policy?

Many lessons which are germane to monetary policy emerge from the appreciation of the nature and causes of the various financial crises described above particularly with regard to the most recent one. Before going into a few suggestions which in any case are all implied in and runs through this work it is important to state that "the underlying cause of these mishaps is the dollar and the central bank that manipulates it. In ages past, it was so simple. A central banker had one job only, and that was to assure that the currency under his care was exchangeable into gold at the lawfully stipulated rate. It was his office to make the public indifferent between currency or gold. In a crisis, the banker's job description expanded to permit emergency lending against good collateral at a high rate of interest. But no self-respecting central banker did much more. Certainly, none arrogated to himself the job of steering the economy by fixing an interest rate. None, I believe, had an economist on the payroll. None facilitated deficit spending by buying up his government's bonds. None cared about the average level of prices, which rose in wartime and sank in peacetime"[27].

The first of all the lessons is that the central bank should implement monetary policy much more prudently so as not to provoke inflationary booms and assets bubbles. Allowing the growth of money to be consistent with reasonable guesses concerning how the economy will expand or contrast is very important. That way, overly excess supply of money relative to demand for economic activity levels (unproductive debt expansions) will be minimized. The target of monetary policy should be money and less on any other variable because changes in money orchestrate the fundamental effects on the other variables. The advantages of pursuing this strategy are many: it reduces the costs of managing liquidity, distractions in pursuing bad credits, more long-term focus which underscores sustainable macroeconomic growth and development etc.

Secondly, I do not know how statutorily independent the central bank really is such that it can refuse to fully accommodate government's fiscal activities. Put another way, it will be important for the central bank to advice against deficits particularly where the extras are for expanded public consumption rather than private production. The ability of the central bank to discourage fiscal deficits as much as possible will equally help in reining on possible future instability that can degenerate into a huge crisis.

Thirdly, financial institutions should have sufficient own-capital covering their risk-weighted assets, while ensuring that their corporate governance activities are strengthened. Perhaps this is where the central bank needs to do more work. Uncompromised supervision of financial institutions compliance with these standards will definitely reduce the level of moral hazards triggered by the central bank. Although this may not directly be within the purview of monetary policy, but on whole, this will definitely minimize reckless financial behaviour. Recently, the central bank made moves to strengthen bank supervision by deciding to send resident supervisors in each bank. The efficacy of this measure is questionable as supervisors can easily be bought over by a bank that is doing badly to cover its excesses. Very simply, it pays such a bank to 'sort out' a resident supervisor with say a N200 million cheque to cover its ass than get exposed and loose its tens of billion naira business. It pays the supervisor in turn to accept such a cheque: after all how much does the CBN pay him/her. A present value of his five years earnings in the CBN may never be up to that amount. Only a firmly willed and morally-steeled supervisor can resist that. My suggestion is that the CBN may have to rethink that strategy.

Should government or the central bank bailout dying or dead banks? My answer is: no. But a precautionary move such as the regular provision of comprehensive and authentic information that will enable the general public appreciate the health status of the banks/financial institutions they patronize will obviously make most operators in the industry sit-up. Any dying bank should be allowed to die so that it sends appropriate signal to other banks and as such help in engendering prudence.

Be that as it may, whereas supervision as explained should be upheld, financial market regulation and other levels of unnecessary intervention should be considerably minimized.

Inter-agency coordination is also very important. "The origins of the current crisis can be traced to both the build up of macro-global imbalances as well as the mispricing of risks in the financial system, which in turn, was encouraged by prolonged easy monetary policy and excess liquidity"[28]. Accordingly proactive cooperation and coordination of strategies among various agencies with oversight responsibilities in the financial market in ways that do not encourage the destabilizing trilogy (inflationary boom, moral hazards and market interference) is important. At best these institutions should burden themselves more with ensuring that rules which ensure unfettered market competition are promoted and enforced.

[27] http://www.independent.org/blog/?p=736

28 D. Subbarao (2008) 'Lessons from the Global Financial Crisis with Special Reference to Emerging Market Economies and India'. RBI Monthly Bulletin November 2008