THE IMPACT OF INTEREST RATE DEREGULATION ON SAVINGS MOBILIZATION IN NIGERIA

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<u>*TITLE PAGE*</u>

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BEING A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF DOCTOR OF PHILOSOPHY (FINANCE) OF ST CLEMENTS UNIVERSITY, TURKS & CAICOS ISLANDS, BRITISH WEST INDIES.

APPROVAL PAGE

This is to certify that this research project was carried out under our strict supervision and has been approved for submission to the Department in partial fulfilment of the requirements for the award of the Doctor of Philosophy Degree (Finance) by St Clements University Administrator, Turks and Caicos Islands.

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PROJECT SUPERVISOR

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THE ADMINISTRATOR

<u>DEDICATION</u>

To all at

St Clements University

for their relentless effort in the

promotion of Distance Learning

Education

<u>*ACKNOWLEDGEMENTS*</u>

tolerant and considerate family is a scholar's indispensable asset in all respects, I express thanks.

<u>DECLARATION</u>

I Okocha, Samuel Obiora, hereby declare that this Dissertation Project is entirely my own composition, and that where works of other persons have been used or referred to, such sources have been duly acknowledged.

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OKOCHA, SAMUEL OBIORA

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DATE

<u>ABSTRACT</u>

The objective of this project work is to assess the impact of interest rate deregulation on savings mobilization in Nigeria, and its linkage effects on investment and hence economic development amid a groundswell of conflicting reports of eminent authors on the influence of interest rates on savings. The study also seeks to eliminate this divergence of views or at least substantially reduce it. As a background, the research analyses some conceptual, historical and theoretical issues as well as deregulatory framework in the financial sector of the economy. Although current work on the subject matter is scarce, efforts were made to review adequately by stretching into a distant past. Deregulation of interest rate involves the systematic removal of 'caps' on interest rate, which may be considered to discourage orderly growth, competition and efficient savings mobilization in the banking industry. A critical appraisal has been made of the prevailing institutional and financial systems of aggregate savings taking cognizance of plethora of enactments over time. And, while the intense deregulation ensured the viability and stability of the banking sub-sector, they tended (through their prolonged use) not only to reduce the competitiveness and efficiency of the sector but appears to have accentuated the problems of management and fraud. However, there arose general improvement in financial intermediation and savings were encouraged with flow of financial resources to the productive sectors of the economy. Of course, more work is required for banks to remain strong and safe. The general conclusion is that the deregulation of the interest rate has significant impact on savings mobilization but did not translate to meaningful development.

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"The elucidation of immediate experience is the sole justification of any thought and the starting point for thought is the analytic observation of components of this experience". Indeed, at an early stage of planning this research, I found much encouragement in this statement by Whitehead (1930:6).

For I know that I was engaged primarily in an attempt to elucidate my own immediate experience bordering on Nigeria's development paradox – growth without development. Or, more appropriately the growth that afflicts its citizens with poverty. In the course of this attempt, the various observations and reflections gathered therein began to look more and more like variations upon a common theme. Consequently, the search for the *primum mobile* became inevitable under the circumstances to further explore the ramifications of this variation.

The tragedy of the Nigerian situation rests on the fact that investments in various sectors of the economy are fast declining. As everybody already know, ours is a mono-product nation which has depended on crude oil for more than 70 per cent of foreign exchange earnings and up to 65 per cent of its Gross Domestic Product (GDP) is tied directly or indirectly to crude oil production. From notable contribution of about 40 per cent to GNP of the manufacturing sector in the 70s and early 80s, the manufacturing sector contributed a mere 4 per cent in 2010 without respite to its declining capacity utilisation. The nation furthermore regressed from a medium-sized producer in mid-60s and 70s to that of absolute consumer and over-

reliance on imported goods of all description. The international ranking organisation once again ranked Nigeria on Foreign Direct Investment (FDI). The 2011 Doing Business Report of the World Bank ranked Nigeria at 131 out of 185 countries surveyed. It is also noteworthy that the 2012 – 2013 Global Competitiveness Index of World Economic Forum ranked Nigeria 115 out of 144 countries surveyed.

The nation continues as it did since the 1970s to trade crude oil for imports of goods and services ignoring one of the basic axioms of economics; namely goods and services can only be purchased with goods and services! The recurrent expenditure patterns across all tiers of government are sadly indicative of tendencies that discount the economic, social and infrastructural challenges confronting the nation. In fact, 80 percent of the nation's income are expended on consumption leaving a mere 20 per cent to such areas as health, education, roads and transportation etc. In such dire circumstances, what would become the fate of investment. "A country where consumption is increasing at an unabated rate cannot afford a reduced rate of investment," warns Efunwoye (1999:9).

It is therefore a rude shock as we watch with nostalgia the inability of government at all levels to embark on useful or enduring investment projects that command high development impact. Sadly enough, scientific thought is largely missing or avoided because at any rate we still lack the capacity for strategic mode of thinking. In philosophical context, we avoid rationality like a plague and enlightenment is anathema. We prefer to remain stuck with archaic order or ways of life precisely like now when we childishly or obstinately refuse to see anything beside sloganeering of a better tomorrow. We are still stuck with what we would like to call the

philosophical mode of pedestrian existentialism. This, of course, is definitely hurtful to our megalomaniac ego inspite of our boastful claims to the contrary.

The crisis presently raging in the country's socio-economic landscape presents a classic dilemma. This is further compounded by leadership's poor state craftsmanship and love for primordial factors in decision making. In corroborating Efunwoye's views in 1999, Sanusi (2011:7) is worried that if he had his way the nation would jettison the state, local governments and ministries which according to him are not viable. To him, it has come to a time in the life of Nigeria that it must overhaul the structures that make the states spend about 96 per cent of their resources paying salaries and allowances as against making capital investments.

The CBN governor spoke October 29 2011 during a book presentation in Kaduna, saying to retain the *status quo* is for Nigeria to remain underdeveloped. According to him, the present development strategies should include measures to invest in human capital with the view to save or capital mobilization that facilitates the upgrading of industries and engender the economy to attain optimal resource allocation. Taking together, some events in the last few years add up to a rather significant didactic value in the life of our nation. This opportunity has come to orchestrate the fluid of patriotism flowing in the bloodstream as a concerned Nigerian whose heart bleed profusely for the present predicament of one time giant of Africa.

I have always been fascinated by the link between investment, economic growth and employment. It is one of the classic elements of economics.

However, many economists will agree that the fascination is actually derived from the 'time lags' between these three important macroeconomic indicators.

Economic growth lags investments, while employment lags economic growth. In other words, economic growth and employment are preceded by investment. Of course, investment in turn is preceded by savings. It has been the crux of my bewilderment for some time now, that the so-called fantastic growth of the last few years was not anchored on investment, but rather on income from oil (itself arising from increase in prices, rather than efficiency in the aggregate production) and consumption that flowed from there. Because the focus of the most developed economies has been on jobs, they have been very careful to emphasise the lag between jobs and economic growth, especially as data do indicate signs of recovery. Essentially, policymakers and economists in these countries have been very careful in stressing that employment always takes a longer time to catch up with economic growth.

The essential lesson of this economic process is that without a certain level of investment, and continued investment at that, sustained economic growth that will lead to the creation of jobs in the Nigerian economy, will continue to be a mirage. In other words, without investment, we might as well forget economic growth. First, it should be understood that without industrialisation, growth is simply bloat and not development. Second, if Nigeria must be pulled back from the fringe and periphery of neo-capitalist global order, then it must be understood that the only way out is industrialisation. And, perhaps one of the issues in development

economics discourse that has refused to vacate the front burner is industrialisation.

However, we do recognise that making the required investment is not as simple as it seems, because questions will remain as to what kind of investments should be made and what level of investments are required, and what combination of public and or private investment should be made. All these depend on the nature of economic growth that is desired. And in many economies, the nature of desired economic growth is determined by the nature and level of employment sufficient for the country's purposes.

Development is defined as growth plus desirable social change in terms of well-being of citizens. So growth may not lead to development if desirable social change does not accompany it. But economic growth is necessary for development to generate resources for social development. What we have is economic nominalism. That is, growth without development. In effect, growth that breeds poverty.

What we desire is the kind of economic growth that brings about employment and jobs for the millions and millions of youths in Nigeria, based on competitiveness, economic efficiency and value-added creations in all areas of our national life.

Since independence, we have failed, miserably, either to understand this process or simply lack the political will to do it. Of course, I lean to the second reason. For many unprintable reasons, we have failed to see beyond the short-term. Remember that employment and jobs lag economic growth, so investment must be a long-term consideration. The effect of

investment today may only be fully felt in five or six years time. Ironically, our political "leaders" are too occupied with prebendalism.

Also, in the 59 years of our independence, no government has been able to pretend it cannot supersede previous governments in the area of consumption. And, no area of government has bastardised this notion of consumption more than the area of recurrent expenditure. It is recurrent expenditure unlimited and accounts as earlier noted 80 per cent of our national income. And, the consequence is that whether in terms of buoyancy such as in the period between 2003 and 2008, and lean period between 2008 and today, recurrent expenditure never suffers.

The only difference between the buoyant and lean period is the borrowings made by the government. In lean periods, such as we have now, the governments at different levels have all approached the stock market in the name of borrowing for development. But you continue the wonder why development did not take place in buoyant periods. In our immediate past, the Federal Government led many states to the capital market for the same purpose – borrowing. Regrettably, at the end of those years, all those funds were virtually spent mainly on recurrent expenditures.

On this basis, there is no platform for economic growth. So, what we are witnessing is a continuous decline in investment because the oil sector that used to attract significant levels of investment in this country, is no longer doing so at the moment owing to various economic and political shortcomings. Unfortunately, there is no reason for this not to continue as macroeconomic conditions worsen and the microeconomic environment nosedives.

While lamenting the lackadaisical attitude of Nigeria and Nigerians towards investment, an Information and Communication Technology expert, Mr. Babajide Ipaye has said for Nigeria to attain its Vision 2020 target, increased investment in the nation's economy was critical. In a report anchored by Punch newspaper reporter Aboderin (2011:40) at a three – day conference highlighted 'investment' as one of the critical growth drivers of an economy and regretted that poor policies over the years had stalled Nigeria's effort at development. Speaking further, Ipaye said: "If the challenge of investment confronting the nation is tackled, the economy would be able to make higher gains globally which would boost the attainment of Vision 20:2020".

And in a related development, Oladepo (2011:79) is worried that "gradually Nigeria has acquired a culture of profligacy". As he put it "we are among the most wasteful, the most ostentatious people in the world, from the highest to the lowest." Ironically, federal government which is supposed to lead at the centre is very uncertain about the economic direction it wants. There is simply the absence of any coherent economic competitiveness strategy that will achieve all the wonderful, but spineless aspirations of Nigeria in the name of Vision 20:2020 and transformational agenda. A very sad commentary that helped trigger the irresistible fascination.

Since it is taken for granted that investment will automatically take place provided savings and investment opportunities are both available, it is only natural to focus on what are in effect the two *terminal points* of the savings-investment process. Clearly, our "ability to invest" is closely related to what has sometimes been termed "absorptive capacity". It has of

course been realised that a country's capacity to absorb capital may be lower than the investment funds available to it because of shortage of relevant skills and other obstacles although this has always been considered a deviation from the norm, Millikan and Roster (1957:60-63).

Simple economics states that income, in whatever form, is either consumed/spent, saved or both. The same simple economics states that investment is a function of savings. That is, an individual (a person or an institution) can invest only to the extent of the surplus income or savings that is available, all other things remaining equal. Caincross (1955:694-700) spoke on insufficiency of savings as the most important factor holding back development having realised that savings and productive investment are as much a result as a cause of development.

A one time professor of Political Economy at Harvard University Albert O. Hirschman and author of *The Strategy of Economic Development,* observes that in advanced economies, savings and investment decisions are independent of one another to a substantial extent and income per capita is one important determinant of the supply of savings. In an underdeveloped economy on the other hand, investment and savings decisions are largely interdependent. At the same time, additions to savings depend far more on the opening up of investment opportunities and on the removal of various obstacles to investment activity than on increased income. Hence, the need for deregulation.

Deregulation is imperative on many grounds especially Nigeria's financial maladaptation. This problem is traceable to its colonial past, whereby the banking system and capital markets developed here have been modelled

after those operating in Britain without effecting necessary adaptation to suit local development conditions.

Many decades after attainment of political independence, with determined effort to industrialise, the country could have got over the colonial heritage problem by restructuring its institutions and adapting them to socio-economic and development needs.

But rather than curing the infested financial structure and orientation, the canker-worm "Resource Curse Thesis" breeded by the oil windfalls, reared its ugly head and further reinforced the financial maladaptation structure and orientation. The disease became rather chronic and endemic defying at times nearly all medicines, often administered out of context, after expiry dates and in a piecemeal, half-hearted form.

Now what is this "Resource Curse Thesis" all about? Basically, this thesis suggests that a well-endowed country is tempted with over-optimism (possibly being under the illusion of being rich) to enjoy its apparent resource advantage vis-a-vis other countries in the form of a less demanding and/or a less prudent development strategy, on the one hand; while the less well-endowed country, mindful of its more marginal position, eschews risk and applies conscious and concerted effort which more than compensates for its initial observed disadvantage, on the other hand.

In the context of the resource gap, it is assumed that the natural resource endowment of a country is of critical importance to economic performance at lower per capita income levels. However, there has been growing evidence among the developing countries, that a favourable resource base

like the rich mineral reserves of Peru or oil in Nigeria might have actually proved counter-productive in terms of overall national development effort and performance.

As could be noted in the Nigerian case, there is no doubt that natural resource endowment like oil windfalls brought higher levels of investment as well as an additional source of foreign exchange, taxation and an alternative route to industrialisation via resource processing. Thus, apart from enabling the country to fill the domestic resource and foreign exchange gaps, resource-based industrialisation is made easier. But while the inverse relationship between resource endowment and economic performance is not a universal law, it has occurred often enough to spawn the resource curse thesis.

Although some oil-exporting countries responded to the post-boom conditions better than others, the formulation of prudent policies for windfall management were the exception rather than the rule. For instance, while some were able to deploy their windfalls prudently, others including Nigeria and Venezuela increased conspicuous consumption of mainly imported items and embarked on non-productive domestic investment projects, mainly of prestigious 'white elephant' type which were usually poorly executed with large cost overruns. The later group that includes Nigeria used their oil as collateral to take "jumbo" foreign loans with unsuitable and costly hard terms, so that far from saving some of the windfall, they actually accumulated large foreign debts which constituted a formidable obstacle o economic development. Thus, in terms of economic development, the 'oil boom' with its oil illusion aftermath has now become 'oil doom'. This conclusion has been substantiated in a study of

Nigeria and some other developing countries, thus: Given the pre-boom rapid rate of Nigerian economic growth and the country's large and competitive agricultural exports (which collapsed during the oil booms), the 1974 – 78 and 1979 – 81 windfalls excluding minor booms frequently thereafter, at least, have most certainly been a curse rather than a blessing.

The remarkable economic transformation that started in Japan much earlier eventually spread through much of East Asia and practically modernised South-East Asia, while Nigeria and some others with oil and other resource endowments continue groping in the unclear path towards economic transformation.

In view of its chequered history of more than a century now, banking development in Nigeria has operational features of diverse nature such that an assessment of the bank's performance would vary with one's criteria or from what angle such an assessment is made. An assessment of bank performance poses some difficulties because of the nature of bank objectives (often conflicting) against which an assessment has to be based. A few key questions about the financial sector performance include:

 (i) What has been the nature of the main financial intermediation process in the economy?

 (ii) How well have banks met some financial requirements that are considered indispensable for economic development?

From available banking data, one might easily conclude that the banks in Nigeria performed averagely well in terms of their profitability and growth over the years. However, the existing conventional methods of measuring the profitability of enterprises are not considered adequate for measuring

the performances of enterprises like bank operating in such an imperfect market situation as obtains in Nigeria. In view of the extent of market imperfection and widespread distortions in economic activities, Nigerian enterprises might be recording increased paper profits while the volume of operations has been on the decline and hence: unabating public criticisms of deteriorating banking services.

In view of the above stated implied objective and coverage, one may wish to be excused by those who would like to point at iconoclastic vim for being rather one-sided in criticising than in extolling the virtues of the financial system. However, one must be fully aware of useful role of the banking sector in savings mobilisation. Furthermore, the aspects we consider relevant for the purpose of the country's overall development should be such evaluation and appraisal of the operations of the main institutions and markets that could facilitate the nation's successful industrial take-off.

Rather than eulogising what those institutions and markets have done and could do, our goal here is to face the stark realities and, looking back at their operations over the years, to enable policy makers as well as the main actors in the system appreciate the sector's limitations as far as its healthy operations and promotion of economic development in a desirable manner is concerned.

The role of the financial system in Nigeria leaves much to be desired in terms of economic development and fostering the country's industrialisation process. The maladapted structure and functioning of banks and other financial institutions, going by dispassionate assessment,

have not significantly changed or improved over time. Thus, there would be need for more concerted efforts and bolder positive initiatives to bring about the desired dynamic change and orientation in a manner to make the banks and other financial institutions become more of assets than liabilities in the country's efforts to achieve concrete development and general welfare of the populace.

From available data, there is no doubt that banks and other financial institutions have grown dramatically over the years both in the number of institutions and volume of finance. But much is called into question when one analyses the proportion of enterprises in need of finance that actually got financed and developed to enhance the country's industrial capacity and also the type, relevance and productivity of finance from banks and other financial institutions. The industrialisation process is unlikely to be served well and fostered in a desired manner by the pattern and direction of finance in Nigeria. Here, the bulk of financing has been predominantly on short-term quick money-making and turning-money-around and asset-switching basis and where long-term finance for capital formation as opposed to spurious and transient investment has been in gross short supply being seen as non-attractive and non-profitable in the context of the distorted value and orientation in the country.

Technical terminologies in finance such as exchange rate, liquidity, and interest rates become popular terms of common usage in the economy as if these are fundamental issues in a nation's socio-economic transformation efforts. The skewed emphasis of money management distorts the primary objective of creating national wealth. Thus, the most flourishing

businesses that our economic policies generate are those built around financial institutions and instruments.

Banks and finance houses spring up continuously as if these institutions can generate national wealth and material prosperity. The best brains, who, ordinarily should constitute the human engine for our material development are naturally attracted to the banking, and general commerce sectors.

Ironically, the stronger these commercial and financial sectors become, the weaker our national economy becomes! This is the paradox of our current developmental economic policies.

Deregulation, according to Olashore (1997:7), "in its application is the removal of regulatory controls on the activities of economic actors in order to enhance their competitiveness in the markets". Deregulation can therefore be described as the deliberate and systematic liberalisation of the structural and operational guidelines which have hitherto impinged upon the growth and profitability of economic actors.

It was the cornerstone of Reagan's administration's supply-side strategy. President Reagan of the United States amplified the logic of deregulation in his address at the opening session of the 1986 World Bank/IMF annual meetings of the board of governors when he stressed that excessive regulations make people less able to experiment and innovate and therefore, restrain economic growth.

Reagan argued that, we need to turn away from small-minded calculators in big state bureaus and look instead to large-minded entrepreneurs in

small private enterprises for (it is) these people (who) know the secrets more profound than those revealed in all of the charts and analysis produced by all the agencies and bureaus put together. Western Europe followed the United States in adopting the policy of deregulation with rapid application to many economic sub-sectors. Margaret Thatcher's comprehensive privatisation drive in the United Kingdom is a manifestation of the trend. The coalition government in France (then) adopted similar policies. Nigeria embraced deregulation as part of its Structural Adjustment Programme in July 1987.

In retrospect, a commission was set up by the Nigerian government in1976 headed by Dr. Pius Okigbo to look at our financial system which had almost not changed from the colonial *status quo* as at 1976. Implementation of the report enabled the financial system undergo tremendous changes, however.

The transformation has since peaked with concepts of deregulation that have accompanied Structural Adjustment Reforms thereafter. The capital markets which hardly existed before 1976 have since been experiencing bouts of over-heating. Unlike the time when efforts were made to create a market through treasury bills, today's market is self-sustaining. But some deregulation hiccups seem to hinder realisation of ultimate benefits.

The shift to deregulation has not been peculiar to Nigeria. It seems, in fact, like a trend across Third World countries embarking upon an adjustment programme. In most cases of deregulation, the tendency has been for a reduction in the intervention of the central bank and in the level of direct

reporting to the bank. In some cases, Central Banks have renounced some of their functions in favour of deposit insurance agencies, notes Olashore.

In Nigeria, the effect of deregulation has been the release of entrepreneurial agencies. This has resulted in the flourishing of banks and non-bank financial intermediation institutions. At the time of introducing the Structural Adjustment Programme (SAP), in 1986, there were no more than forty (40) licenced commercial and merchant banks.

Some of these were partly-nationalised out-growth of multi-national banking enterprises introduced during colonial rule or immediately after independence. Others were state government-owned banks and a few merchant banks that were established by Nigerian entrepreneurs early in the 1980s. Between 1986 and 1991 alone, more than a hundred additional banking licences were granted. Just as banking mushroomed into a major growth industry, non-bank intermediation agencies also blossomed, packaging unit trusts for the small investor and facilitating access to capital for business ventures requiring an approach more flexible than traditional banking practices would permit.

The outcome of this effort at deregulation has been so much controversial, alleges Olashore. For instance, for financial house (non-banks) there has been the question of illegal unit trusts which continues to attract the wrath of the regulatory agencies. For banks, it has been a question of whether or not there are too many of them, a matter of reviving the age-old controversy of whether or not Nigeria is under-banked. During a call in early 2000s on the President by members of the Chartered Institute of Bankers, the issue was raised by way of a request for a moratorium on

banking licences. The request generated an impassioned debate in the press and there arose the question of the adequacy of suitably qualified and experienced manpower to operate these banks efficiently enough to make the banking system a net asset to the economy. This may be an aspect of the request of the Chartered Institute of Bankers that has not been appropriately represented in the discussion of the issue in the popular press. One other implication of the current spate of investment in the financial services industry is the denial of such investments to the production industries. This may affect the orderly and balanced development of the economy.

Beyond controversies, financial institutions under the regime of deregulation hold out certain prospects. The process of deregulation to which many of these financial institutions owe their parentage, also has fatherhood claims on privatisation of many enterprises in which government had equity. The process of restructuring institutions due for privatisation and commercialisation really proved real challenge to the deregulated financial system. There is no question that the Nigerian banking system has not done much in the area of investment and venture capital. Perhaps the challenge of privatisation will continue to bring out the investment bankers to help with the restructuring of the many enterprises in dire need of such services.

Perhaps the biggest prospect of banking deregulation is the impact on customer services of a much more competitive business environment. Many bank customers complain about arbitrary charges levied on their accounts by banks. They also complain about shoddy services in spite of all these charges. With so many banks chasing after a limited number of

customers, there will be pressure to offer more competitive services. We already see this trend from the many new products being put together by banks. As current trends resulting from deregulation unfold, long queues are already disappearing from banks. Many banks have fully computerised to make their services more efficient so as to keep their old customers and attract new ones.

Increased competitiveness in the Nigerian financial services industry will also mean that old and perhaps still current financial practices of self-deceit with regard to actual earnings performance, will have to change. There is often times a tendency for banks to count among their incomes expected earnings from obviously bad and very doubtful debts. Having so carried on their accounting, they go one further bad step of throwing good money after bad by paying taxes on this imaginary income. This continues to chip away at their capital base, making them increasingly uncompetitive.

Invariably, deregulation will force many financial institutions to seek continuous innovation. This will make them better able to compete where it matters, in financially well-thought out projects that will lead to the creation of more real wealth in the Nigerian economy. This will be moreso, the case, if regulatory authorities do not encourage the sustenance of weak and poorly managed financial institutions by the guarantee of cheep income through the manner of administration of such services as foreign exchange sales.

Having cited the level of available skills in the economy as one of the reasons some may be arguing for a moderated pace of licencing new

banks, it is also important to note that one of the prospects of deregulation is that there will be increased development of financial services skills in the country. The higher remuneration and perceived opportunities for greater personal advancement in the finance industry continues to attract highly qualified and talented people to the industry. This will no doubt, be of immense benefit to the industry, however, to the disadvantage of the other sectors of the economy.

Nonetheless, the development of appropriate skills in sufficient number to cope with the enlarged demands of the finance industry remains a real challenge. Perhaps a regime of incentives or a set of guidelines from the apex regulatory bodies could cause financial institutions to set aside an adequate percentage of their turnover for manpower development purposes. One bank executive comically raised the alarm over the deluge of "certificated" as against "educated" prospects.

One of the achievements of Structural Adjustment Programme is that it has reduced the urban dominance of economic policies. Over the years, the heavy urban orientation has led to policies that have penalised agriculture and other rural sector-based activities. With the deregulation programme, more money has been going to the rural sector than was hitherto the case. In many other African countries, as the study commissioned by the African Development Bank (ADB) to mark one of its Board of Governors meeting seminar shows, savings are often mobilised in rural areas and lent in urban areas. In Nigeria, we reduced, through faulty policies, the rural areas to subsistence dwellers eking out a survival. With the Structural Adjustment Programme, the rural areas are already a source of savings mobilisation and of investments. A banking industry that has generally

subdued the rural areas will not be able to take advantage of these unless it changes and responds to the new challenge. If the attitude of Nigerian bankers towards rural areas keeps faith with Structural Adjustment Programme and its gains continues to manifest themselves in tilting the rural-urban imbalance, then rural banking should prove to be an area of opportunity in this era for Nigeria's financial institutions as well as savings mobilisation.

To come to terms with the impact of a deregulated financial system could have on the Nigerian economy, we need to establish what we think will be the nature of Nigeria's economy. There are factors that will probably be critical to what the Nigerian economy will look like consequent upon deregulation. One of them as its component is on-going reforms in various strata of the economy. Another set of events that will influence the economy will be global economic trends such as the European Economic integration, the Pacific Basin that has become a high wage economy and technological developments that continuously, redefines what raw material is for industry. Also, likely to be a factor will be the emergence of major trading blocks that will against the rule of modern dominant philosophies of free trade, become protectionist fortresses even as they liberalize and open up trade internally between member states. How the Nigerian financial system can help the economy deal with the challenges posed by these developments will probably rest on a tripodar namely:

(i) The financial system must truly be seen as the framework of laws and regulations, financial institutions and practices which control the flow of financial resources within the economy.

(ii)   It must also truly consist of a network of financial links between economic units, a web of debts and shares.

(iii)   It must truly be a superstructure erected on the basis of the real wealth of the nation.

Governments that tried to occupy the commanding heights of their economies found themselves looking a long way down, to stagnating growth and deteriorating performance. The policy lesson was and is clear. Governments must get out of activities that competitive markets do best; producing and allocating goods and services. That message has been heard around the world and to great effect.

The market message was new and true, but it is only part of the story. There are indeed things that governments must not do. But taking the brakes off is not enough to make one's car go, and crash diets do not ensure continuing health either. Government involvement to make the tangible and intangible infrastructure investments that underpin rapid growth and a healthy private sector – and that ensure social and economic justice – is critical to growth.

To recap, every industry has certain rules and regulations that it must abide by. These rules are created by industry associations and watchdogs, as well as the government. Deregulation occurs when the government pulls back from the industry a bit, therefore loosening its grip on particular rules and regulations.

The purpose of deregulation is to allow a particular industry to foster greater competition, create a freer marketplace and hopefully spur economic growth both within that marketplace and in general. When

industries become deregulated it gives that industry's players greater leeway in which to improve their products, craft their brand and, ultimately, appeal more to consumers. In other words, when deregulation works, there are numerous advantages--most of them to the consumer in the form of lower prices, more providers and better products.

1.1   Statement of general problem

Various hypotheses have been postulated by notable theorists and financial experts in their various studies relating to interest rate deregulation and relaxation or cancellation of the policies of direct control as presently being widely adopted in most developing countries.

There is a postulation that interest rates have a positive response to savings and economic growth, with investment serving as the link, McKinnon and Shaw (1973:62). On the other hand, notable authors and theorists have also concluded that behaviourally and operationally, real interest rate is not the only factor that can be attributed to as the link between savings and investment Bhatia and Khatkhate (1975:229-45), and Fry (1979:466-75). Also Mwega et al (1990:7) saw the effect of the real interest rate on investment, although insisting its link with savings was difficult.

Studies conducted on the effect of adjustment programmes on economic growth also tend to assume the existence of the Keynesian savings, investment and macro economic balance, Ndulu (1990:3). Studies relating interest rates to savings, investments and money supply in Nigeria, though limited in scope have not been conclusive, Ndulu claims.

Authors like Lambo (1986:7), Ajayi and Ojo (1986:213), Oyejide (1972:18), Ajayi (1978:55), Teriba (1974:11) and Ajewole (1989:9) conclude that interest rate is an insignificant factor while others like Oworekun (1978:16) concludes that it is significant. Soyibo and Adekanye (1992:9) also established its applicability to Nigeria but suggested that the savings mobilized as a result of financial system liberalization need to be transmitted to investment in order to influence economic growth positively.

In throwing more confusion, Shackle (1965:151) says: "it has been admitted from Marshall's time at least that the influence of the interest rate on saving is doubtful even as to its algebraic sign". And, in making matters worse, barely one year later Balogh (1966:26) also says: "An increase in the rate of interest, according to historical experience, does not seem to have an influence on rate of saving". It should be noted, Marshall unquestionably occupied the heights of the late Victorian economics to the end of World War I.

In spite of these conflicting findings, Nigeria however introduced the deregulation of the interest rates with the intention to encourage savings and by extension economic growth. Hence, this study tries not only to consider its applicability or otherwise in the Nigerian situation but its impact on savings, investment and general economic development.

1.2   Background to the subject matter

Much of the information needed to understand and define a problem can be described as 'background'. This is the situation in which the problem exists, the fixed factors which are not expected to be changed by any

conclusions resulting from the investigation. Indeed much of the background can be regarded as a constraint on solution; so to speak, it is sacrosanct.

The mobilisation of financial savings is imperative, notes Sodangi (1996:18), particularly because of developments over-time in the international scene. As an aftermath of the debt crisis of the 80s, international funding was greatly depressed and increasingly the pointer is for developing countries to finance investments from domestic mobilisation of savings. The problem of dwindling inflow of foreign funding, Sodangi further stresses, would be further aggravated by financial crisis that was yet to fully abate in many parts of the world. Furthermore, the collapse of communism in Eastern Europe particularly the former Soviet Union has put additional pressure on sources like the International Bank for Reconstruction and Development (IBRD) and International Monetary Fund (IMF).

Due to the interrelatedness of savings to investment, economic growth and development of any nation, any innovative effort or incentive aimed at mobilising domestic savings would be novel and has the potential of preparing the country for massive industrialisation anchored on self-reliance, concludes Sodangi who was in early 1990s, the managing director and chief executive of the defunct Bank of the North Ltd.

However, without a developed financial system, institutions, firms and households would be forced to operate as self-contained economies. As a result, they could not save without deploying their resources somewhere, and they could not invest without saving from their own current output. A

financial system allows trade between individuals to accomplish both these ends. It allows savers to defer consumption and obtain a return for waiting. Likewise, it permits investors to deploy resources in areas of those that they have available from their own wealth in order to gain the productivity that such investment yields. The economy also gains from the financial system, as both households and firms advance the economy, total output and economic growth.

Perhaps, due to centrality of banks to savings; in any economic reform, banks are always the focal point of such reforms. Banks are also among the most visible casualties of economic collapse. Inasmuch as a failing bank, many times, meant the loss of a family's savings or a sinking business, banks were often painted more as villains than as victims.

There is also a reflection of the belief that banking is prone to "excessive and unwholesome" competition, which if uncontrolled, would lead the industry to its own destruction. Under this view, if banks were allowed to compete for depositors' funds by raising interest rates, they were induced to increase the yields on their assets to compensate for higher deposit costs, banks would turn to higher-yielding, but riskier, assets. It was thought that interest ceilings would eliminate the incentive to raise deposit rate and thus reduce risk.

August 25, 2013 Sunday PUNCH editorial says that a recent report of the African Development Bank has once again pointed at the missteps and ineptitude of the management of the nation's economy and that Nigerian economy is still in dire straits.

With all indices of development on the decline, soaring unemployment, crushing poverty and a rapidly vanishing manufacturing sector, Nigeria cannot continue to be a by-word for the paradox of plenty: rich in resources but with 69 per cent of the people living in poverty. Yet, political office holders earn the highest wages in the world, according to the AFDB statement.

Indeed, the decrease of our industrial and export growth rates inspite of being the 7th world's largest oil exporter exposes Nigeria as investment – averse. Deji Sodipo who spoke at a book launch September 2, 2013 in Lagos lamented the inexplicably deplorable state of investments which makes this more poignant.

1.3 Purpose of the study

Interest rate is an important macroeconomic variable in any economy, be it developing or developed. Interest rates have an important allocative influence on the level of economic activities such that changes in it can exert a significant impact not only on the level of investment but also on the distribution of income between present and future consumption i.e savings.

Interest rates are useful in gauging financial market conditions. When the structure of interest rates is altered, the resulting relative rates of return will include shifts in the asset portfolio of both the banks and non-bank public. And to that extent, interest rate is a major tool of monetary policy. Consequently, the direction and magnitude of changes in market interest rates are of primary importance to economic agents and policy makers.

The primary role of interest rate policy is to help in the mobilization of financial resources and to ensure the efficient utilization of resources in the promotion of economic growth and development.

Opinion is not monolithic on what should be the pursued interest rate policy in Nigeria. The private sector particularly, the Nigerian Association of Chambers of Commerce, Industries, Mines and Agriculture (NACCIMA) and the Manufacturers Association of Nigeria (MAN) disagreed on the issue of interest rate policy. NACCIMA argued vehemently for the deregulation of interest rate to encourage banking culture in the country. They stressed that interest rate is related to the entire economy and should be at a realistic level in view of the rate of inflation in the country. Bankers, an integral part of NACCIMA argued that at the prevailing rate of inflation, pre-deregulation lending rate is negative and are discouraging to both depositors and lenders.

Manufacturers Association of Nigeria (MAN) being the borrowers had argued along different lines. MAN sees high interest rate as one of the causes of inflation and thus high prices of goods. They claim it is better to encourage people to go into ventures that would expand the productive capacity of the economy rather than saving funds in banks.

As a result of conflicting views on the perceived role of interest rate in Nigeria and the interest rate policy to pursue, there is need for empirical evaluation of the impact of interest rate deregulation on savings mobilization and its linkage effect with the growth of investment and general economic development in Nigeria. The broad purpose or objective of this study is to investigate whether the deregulation of interest rate has

any effect on aggregate institutional savings mobilization. This includes public and private savings in commercial banks, merchant banks, federal savings bank, national provident fund, federal mortgage bank and premium bond savings certificate.

In particular, the study will test the validity of the hypothesis that financial conditionalism, especially deregulation matters in savings behaviour in Nigeria. That is, positive real interest rates encourage savings.

Specifically, the objectives of the study are as follows:

1. To ascertain the nature of the interest rate deregulation policy, its design and implementation in Nigeria.
2. To analyse the impact of the deregulation of the financial system especially banks on savings as well as how equipped or ill-equipped in facilitating savings mobilisation.
3. To also link its effect on gross domestic investment.
4. To assess its impact on the real GDP and its significance to the economy.
5. To offer recommendations relating to the successful operation of regulatory and deregulatory policies favourable to savings mobilisation in Nigeria.

These objectives are meant to capture the vision and pioneering effrontery in craving for savings and by implication investment in the nation's commercial life.

1.4   Rationale for the study

The deplorable state of Nigerian economy in the eighties on aftermath of the collapse of oil prices in the mid-1981 culminated in foreign exchange crisis. The imperfections in the financial and other markets certainly constrained their allocative efficiency of resources in a free market system. Such market imperfections lead to flagrant growth, rising inflation, unemployment, mounting external debts and these are more inherited in the less developed countries than in the developed ones.

As financial intermediaries, banks play the important role of channelling funds from surplus economic units to the deficit ones in order to facilitate business transactions and economic development. Generally, interventions especially in the financial market have been a worldwide phenomenon ever since the great depression of 1930s. The intervention is to correct the imperfections created by the market-oriented operations of financial system.

However, for quite sometime, there has been a mounting resentment concerning government intervention due largely to distortions resulting from financial regression. In order therefore, to eliminate or at least minimize these distortions, economists and bankers have been opting for the deregulation of the financial system.

In the early eighties, many less developed countries embarked on various Structural Adjustment Programmes aimed at efficient allocation of scarce resources through the generation of the market forces.

Consequently, on the 1st of August, 1987, the Central Bank of Nigeria announced the deregulation of the interest rate as one of the techniques

used, among others, to deregulate the economy under the Structural Adjustment Programme. Prior to 1985, the level and structure of interest rates were administratively managed by the Central Bank of Nigeria as part of the broad monetary and credit policy decisions largely to obtain social optimum in resource allocation to promote orderly growth of the financial market, to combat inflation, and to lessen the burden of internal debt servicing on the government. The underlying objectives of the interest rate deregulation are:

1. Allow the free forces of demand and supply to determine the rate of interest and through that means improve the allocative efficiency of the existing scarce resources.

2. Serve as an incentive to savers, the high return on savings was supposed to attract more depositors to the banks and thus encourage the volume of savings.

3. Mop up the excess liquidity outside the banking systems and make this available to investors.

4. Reduce the incentive for businessmen to carry large inventories and release funds from non-productive investments as a means of hedging against inflation.

5. To reduce capital flight and to some extent boost capital inflows.

Prior to the deregulation of the financial system, interest rate dealings were pegged and administered by the Central Bank of Nigeria at very low rates as a matter of deliberate policy given the fact of high inflation which persistently presented negative real rate of interest. In other words, there

was always the stipulation that various rates should not fall below or exceed certain ranges. In fact, for certain sectors of the economy, interest rates were even subsidised; that is, lower than rates obtainable in the general economy. This is definitely counter-development.

1.5   Significance of the study

At empirical level, the conflicting and controversial positions of eminent authors over the impact of interest rate on savings and so on has become too worrisome and need to be resolved or at least attenuated. The confusion that have attended the issue involved have created enormous problems for macroeconomic management which, if not brought to rest through empirical evidence, will continue to hinder innovative approaches to interest rate policy.

At a somewhat serendipitous level, it brings to the fore the fact that savings precede investment, and investment precede employment and by extension individual well-being or nation in general. Savings can therefore lead to economic development. This syllogism endorses the logical proposition which states that savings mobilisation does lead to national well-being of a nation through real development. An awareness currently at an alarmingly low ebb.

The study is no less significant at socio-economic level as the basis of Nigeria's material poverty and under-development is known to derive from the fact that macroeconomic management is yet to come to terms with employment generation and wealth creation which can only come through a robust manufacturing sector and does neither see any need to deepen savings mobilisation nor reasonable reduction in the amount of

money expended in running a bloated sybaritic government. Thus, the extant belief that it is lack of savings culture in Nigeria that is responsible for our abysmal failure to industrialise is therefore not misplaced.

Finally, it would be of great benefit to examine the extent to which the entire financial system has encouraged or discouraged savings mobilisation. And in particular, the contributing factors of facilitating institutions in raising public confidence through various areas of support and oversight responsibilities cannot be neglected.

1.6 Limitations or constraints of the study

The study will observe a period of time between 1997 and 2009, which tally with acceptable sample in the period of deregulation of interest rate in Nigeria. Particular reference will be made to savings deposit in Commercial Banks and Merchant Banks although pre-deregulation era policies and practices were studied so as to carry out comparison between savings mobilization era of interest rate regulation and deregulation.

It should be noted that the findings of the study may on grounds of peculiar nature of Nigeria, not necessarily be applicable to other sub-Saharan African countries or other developing countries adopting the Structural Adjustment Programme. Meanwhile, what I will refer to as the "Nigerian Factor hypothesis" may not after all be divorced from the limitations of this study having significantly affected deregulation programme directly or indirectly.

A school of thought basking in the sanctity and superiority of argument says Nigeria is a philosophical problem. That is, an issue or subject that is

hardly settled or decidable epistemologically, metaphysically and logically. Otherwise, why is Nigeria a big contradiction in modern times having refused to jump or leap to even the penumbra of development inspite of bouts of huge petro-dollar earnings? It is not surprising that justification of Nigeria as a philosophical problem comes readily from the failure of virtually everything: institutions, infrastructures, values, leadership and so on.

It is important to recognise that economic rules work best where accountability is taken seriously, where there is near-perfect information flow, where market participants behave rationally, where production keeps pace or out-paces consumption and there the private sector is dominant. The very absence of these conditions has meant that invariably economic rules get endlessly tinkered in an effort to get them work. It is inexcusable wearing a fur coat in tropical sunshine.

Besides these drawbacks, there is a surprising scarcity of current work on the subject. Hence, the prompting into very far distant past for such issues as interest rate policies, etc. as practiced elsewhere. Furthermore, the attempt to put the various views and components of the subject matter – deregulation, interest rate and savings in a proper context led to emergence of *iteration* which has unavoidably denied this project much of its methodological fervour.

The study is however limited to Nigerian situation.

1.7   Delimitation or scope of the study

The scope of this study is somehow blur due to the nature of the subject matter – economic growth, investment, deregulation, interest rate and savings. Moreso, in terms of the theory of economic policy, the objectives of policy and the instruments available to the government are paramount. In the first place, economic objectives at the macroeconomic level are set in terms of full employment, price stability and rapid economic growth, together with long-term equilibrium in the balance of payments. However, in general terms, the policy instruments available are fiscal policy, monetary policy and incomes policy, and other instruments aimed at the balance of payments, such as the exchange rate or import controls. These policy instruments are sometimes called "instrumental variables". That means variables over which the government has some control, and the values of which affect the behaviour of the economy itself in some reasonably systematic way.

Secondly, policy instruments are not independent of each other. That is, they are mutually interdependent which also makes interest rate command wide spectrum of attention. For example, fiscal policy has implications for the money supply and for the rate of interest. In turn, the domestic rate of interest will, by its effect upon short-term capital flows, influence exchange rate, and will also affect the money supply. Monetary policy on its own aims to influence monetary variables such as the rate of interest and the money supply, in order to realise the target set for the major objectives. The rate of interest and the money supply have the closest interrelatedness. Interest rate, as rightly noted by Harrison (1999:429-64)

is a monetary control measure such that "a change in interest rates affects all money market institutions equally and simultaneously".

Thirdly, the role of banks as a safe depository is indispensable as far as savings is concerned. And, only a healthy banking sector can serve the needs of savings mobilisation and should exhibit high level of confidence. According to Kracaw (1992:108), "commercial bank regulation is one of the oldest and most controversial public policy problems relating financial systems globally". On this note, the scope of this study looks at the shape and form of the bank of the future which depends upon how well the regulatory philosophy and structure of the past survives the competitive pressures of the present day.

The scope of this study has not only been defined by the major objectives of the study but a setting that takes cognizance of other relevant areas appropriate for the depth of enquiry occasioned by the Statement of Hypotheses.

1.8   Definition of Terms

Aggregate demand: The total of intended or *ex ante* attempts to spend on final goods and services produced in a country.

Asset: Anything with value in exchange.

Attribute: An attribute is a quantitative characteristic.

Axiom: A self-evident proposition; that is, one which is believed to be true but has to be assumed and cannot be proved.

Bad debt: Debt whose repayment is known to be impossible or unlikely.

Bank: A financial institution whose main activities are borrowing and lending money.

Bank regulation: The application to banks of public controls stricter than those on businesses in general.

Bankruptcy: A legal arrangement to deal with the affairs of individuals unable to pay their debts.

Barter: The exchange of one type of good and service for another, without the use of money.

Bias: The tendency for estimates of variables to be systematically too high or too low.

Black economy: Economic activities not reported to the tax, social security and other public authorities.

Black market: Trading which violates rationing or price control laws, or usually both.

Bond: A security with a redemption date over a year later than its date of issue and may be issued by firms, financial institutions or governments.

Bond-rating agency: An agency specialising in assessing the creditworthiness of governments, municipalities and corporations issuing bonds. For example, Standard and Poor's and Moody's.

Boom: A period of optimism, high economic activity, and relatively low unemployment.

Bottom line: The profit or loss on an activity.

Broad money: a relatively broad definition of money. This applies in definitions such as M2, which includes building society deposits or M3, which includes interest-bearing bank deposits. It does not apply to M0 or M1.

Bubble: A cumulative movement in the price of an asset whose price is high mainly because speculators believe it will rise still further.

Bullion: Gold held in bank usually in the form of gold bars, largely by central banks as part of their countries' foreign exchange reserves.

Characteristic: Some property which may distinguish one unit from another. Characteristics are of two kinds, qualitative called *attributes* and quantitative called *variables.*

Competitiveness: The ability to compete in markets for goods or services.

Compound interest: A loan where the interest due each period is added to the amount outstanding. The interest of earlier periods thus itself earns interest in latter periods.

Concepts: Models, ideas or propositions that relate to the subject of study.

Constraint: A condition which has to be satisfied for any socio-economic or even political activity. Project constraints are time, cost, risk, scope or any other factor that limit options.

Contagion: The tendency of investors to doubt the solvency of some firms or countries when others are in trouble. Default by one bank, for example, may trigger a run on other banks.

Credit rating: An assessment of the probability that an individual, firm, or country will be able and willing to pay its debts, (creditworthiness).

Credit risk: The chance of loss due to default or change of creditworthiness of a counter party.

Crowding out: The possibility that an increase in one form of spending may cause another form to fail.

Data: Raw information relating to a particular subject that a researcher is interested in.

Data analysis techniques: The statistical methods of analysing data in research. They generally depend on many factors such as sample size, and characteristics, the nature of the hypothesis formulated and the research design.

Data collection instruments: The device for collecting the data or measuring variables, which are used for answering research questions and/or testing study hypothesis.

Data gathering: The process of collecting data, it may rely on primary or secondary sources.

Data summary: Data presented in the form of tables, chart and graphs.

Default: Failure of a debtor to make timely payments of principal and interest as they come due or to meet other provisions such as a bond indenture.

Default probability: The likelihood that an obligor or counterparty will encounter credit distress within a given time period.

Deindustrialisation: The tendency for the industrial sector to account for a decreasing proportion of GDP and employment.

Deregulation: The removal or reduction of government regulation of economic activities.

Development economics: Economics applied to the problems of Less Developed Countries (LDCs)

Elasticity: A measure of responsiveness of one factor to changes in another.

Empiricism: A scientific method of research, which is based on facts obtained from observations or other practical methods.

Ex ante: As viewed in advance. The *ex ante* values of a variable is what the person or organisation responsible expects it to be. An individual's *ex ante* savings, for example, is the amount they intend to save. *Ex ante* is contrasted with *ex post*, meaning as viewed after the event. *Ex ante* plans may not get carried out: individuals may save more than they intended if the goods they meant to buy are not available, or may save less if their incomes fall unexpectedly. *Ex ante* investment is what a firm intends to invest. Actual or *ex post* investment may be less than *ex ante* if building operations are delayed, or *ex post* investment may be more than *ex ante* if goods produced cannot be sold, so that stocks accumulate unexpectedly. It is necessary for equilibrium that when aggregated over the whole economy *ex ante* plans should be consistent. *Ex ante* variables usually cannot be directly observed: individuals or firms often do not announce their intentions and even if they do one may not necessarily believe the

announcements. This is in contrast to *ex post* variables which are all in principle observable and consistent.

Executive summary: Also referred to as Abstract, is an overview of the entire work presented in a short and concise manner.

Federal Reserve System (FED): The United States system of central banking. This consists of a board of Governors in charge of twelve District Reserve Banks (a district here means a group of states).

Financial assets: Money and claims, as distinct from physical assets such as land, buildings or equipment. Financial assets include money, securities giving a claim to receive money, such as bills or bonds, and shares giving indirect ownership of the physical and financial assets of companies.

Financial markets: The markets in which financial assets are traded.

Financial repression: The imposition of liquidity constraints through allocation of loans by administrative means rather than use of the market.

Fiscal policy: The use of taxation and government spending to influence the economy.

Foreign Direct Investment (FDI): The acquisition, by residents of a country of real assets abroad.

Foreign investment: The acquisition by residents of a country of assets abroad.

Free market: A market in which people buy and sell voluntarily without legal obligation.

Gilt-edge security: A fixed – interest security issued by the United Kingdom government. Gilts may be irredeemable consols; long – dated, with 15 years or more to maturity; medium dated, with 5 to 10 years maturity; or short – dated, with under 5 years to maturity.

Globalisation: The process by which the whole world becomes a single market.

Great Depression: The worst depression in living memory believed to have contributed to the rise of Hitler to power in Germany and thus to the second world war.

Gross Domestic Product (GDP): One of the main measures of economic activity. *Gross* indicates that it is calculated without subtracting any allowance for capital consumption; *domestic*, that it measures activities located in the country regardless of their ownership. It thus includes activities carried on in the country by foreign – owned companies, and excludes activities of firms owned by residents but carried on abroad. *Product* indicates that it measures real output produced rather than output absorbed by residents. GDP is reported at both current and constant prices.

Gross National Product (GNP): One of the measures of national economic activities. *National*, means that it includes residents' incomes from economic activities carried on abroad as well as at home, and excludes incomes produced at home but belonging to non-residents.

Hyper – inflation: Very rapid inflation; it is sometimes reckoned to set in when price increases exceed 50 per cent per month. Such rapid inflation not merely makes money useless as a store of value but seriously affects

its use as a medium of exchange, and greatly disrupts productive economic activity.

Hypothesis: A tentative statement postulated by a researcher, which must be tested in order to establish its validity. The testing of a hypothesis may result in its acceptance or rejection.

Illiquidity: The property of not being easily turned into money.

Immiserizing growth: Growth of national or regional production which actually decreases welfare.

Industrialisations: The process of moving resources into the industrial sector. This is common in the early stages of economic development when resources move out of primary production.

Inflation: The rate at which the price that consumers pay for goods and services rises over time.

Innovation: The economic application of a new idea.

Insolvency: Inability of an individual or company to pay debts as they fall due. This may lead an individual to become bankrupt, or a company to go into liquidation.

Interest: The cost of using money expressed as a rate per period of time, usually one year.

Interest rate: Cost of using money, expressed as a percentage rate per annum. That is, rental payments for the use of credit by borrowers and return for parting with liquidity by lenders.

Interest rate options: Caps are an upper limit on interest rates (if you buy a cap, you make money if interest rates move above cap strike level). Floors are a lower limit of interest rates (if you buy a floor, you make money if interest rates move below floor strike level.

Interest rate risk: Risk arising from fluctuating interest rates. For example, a bond's price drops as interest rates rise.

Inquiry: Enquiry also admissible, is an investigation conducted by a researcher to find out the truth of a situation or object or even a phenomenon and to collect necessary data for the purpose of study.

Investment: The process of adding to stocks or work-in-progress of real productive assets. Investment is also considered in conjunction with savings. At the world economy wide level, investment and savings *ex post* on some definition must be equal. At the level of the individual, firm, government or country, however, there is no reason why savings and investment should be equal either *ex ante* or *ex post*.

Justification: The purpose or reason for conducting a study or research.

Liberalisation: A programme of changes in the direction of moving towards a free-market economy.

Linear regression: A statistical method of measuring the extent to which variations in one variable are associated with variations in others.

Literature review: The identification and review of existing knowledge and information about the subject of the study. It involves consideration of methods and results of previous researchers to the subject at hand and the

identification of possible convergence and divergence between those studied and the one in view.

Macroeconomics: The macro aspects of economics, concerning the determination of aggregate and average figures in the economy.

Market economy: An economy in which a substantial proportion of economic decisions are taken by the use of markets.

Market forces: The process of supply and demand which determine equilibrium quantities and prices in markets.

Methodology: The research design and procedures followed by a researcher designed to provide an objective and systematic and organised method of conducting the study.

Minimum Rediscount Rate (MRR): A tool the Central Bank of Nigeria (CBN) uses to influence the level and direction of interest rate movements through changes in MRR to reflect the prevailing market conduction.

Monetary policy: The use by the government or central bank of interest rates or controls on the money supply to influence the economy.

Moratorium: A suspension of the obligation to repay debts; this may apply to the principal, interest, or both and may apply to all debts or only to particular type of debts.

Nominal rate of interest: This according to Fisher's theory, is the real interest rate adjusted for inflation.

Null hypothesis: The hypothesis that a variable has no effect. For example, in investigating the relation between income and saving, the null

hypothesis could be that income level of an individual does not affect the proportion of income that is saved.

Obligator: A party who is in debt to another (i) a loan borrower; (ii) a bond issuer; (iii) a trader who has not yet settled; (iv) a trader partner with accounts payable; (v) a contractor with unfinished performance.

Objectives: The purpose of a research; what the researcher expects to achieve as a result of the research effort.

Opportunity cost: The value of something forgone.

Paradox of thrift: The argument that a rise in the *ex ante* propensity to save; that is, the share of incomes that people want to save, may not increase the *ex post* level of savings and investment in the economy, which may even decrease.

Population: The subject of a statistical enquiry and it may be human, or non-human or hypothetical.

Primary sources: Consist of first hand information for the purpose of study analysis and are the raw data obtained by the researcher himself through the administration of research instrument.

Privatisation: The transfer to private ownership and control of assets of enterprises which were previously under public ownership.

Problem: The difference between what is desired and what is acquired. It is the arithmetic difference between the 'ideal' and the 'actual'. That is, Ideal (what is desired) minus Actual (what is acquired) is equal to problem. A problem can, therefore, be defined as a conflict caused by the

difference between the Ideal and the Actual in an object-to-object interaction, object-to-person interaction, and/or person-to-person interaction.

Rate of interest: The cost of credits.

Real interest rate: The real return on loans. This is the money return, adjusted for inflation. If the nominal interest rate is 100i per cent and the rate of inflation is 100p per cent, the real rate of interest of 100r per cent is given by $(I + r) = (I + i) / I + r)$

References: Also known as Bibliography. Cited work of authors whose views are used and acknowledged within the text.

Research: An enquiry about the truth of an issue or event. Thus, it is concerned with search for knowledge.

Research design: A blueprint or scheme that is used by the researcher for specific structure and strategy in investigating the relationship that exist.

Risk: Uncertainty or exposure to a chance of loss or damage.

Savings: The excess of income over consumption.

Secondary sources: These are existing data obtained from relevant materials such as books, journals, magazines, and so on as well as unpublished works of others inclusive of other valuable documents available to the researcher.

Stimulus: A stimulus package is a specially designed and extraordinary government intervention aimed at the entire economy or a part thereof, with the purpose of stimulating economic activities.

Stock: Ownership interest possessed by shareholders in a company. That is, stocks as opposed to bonds.

Stress testing: A process of determining how much the value of a portfolio can fall under abnormal market conditions. Stress testing consists of generating worst-case stress scenarios (for example, stock market crash) and revaluing a portfolio under those stress scenarios.

Time deposit: A deposit in a financial institution such as banks where the depositor is requested to give notice of withdrawal or is subject to an interest penalty in lieu of notice.

Undercapitalised: Having too little capital in relation to the business carried on or intended.

Usury laws: Laws restricting the level of interest that could be charged or paid for loans.

Utility: Usefulness; power to satisfy the wants, needs etc. of people in general. Also a synonym for individual welfare. A utility function gives an individual's welfare as an increasing function of the various goods they consume and a decreasing function of various types of work performed.

Variables: Controllable and uncontrollable quantitative characteristics about a phenomenon being studied.

CHAPTER TWO

2.0   REVIEW OF RELATED LITERATURE

This chapter on Literature Review is an essential step in any research endeavour on account of prominent role it plays. It is a process involving the systematic identification, location and analysis of documents containing information relevant to the research problem areas of interest. In other words, the critical evaluation of current and past works and materials relevant and related to the subject of investigation, with a view to identifying areas of convergence and divergence in such works and materials.

It therefore, among other things, sets out major theoretical framework of this study through call for relevant works of reference of renouned authors germane to the research questions and hypothesis. In this regard, works of distant past deemed to contain relevant or related findings and critical to this study are included. Under the circumstance, the concepts, theories and models propounded by various authorities cannot be left out.

The essence of developing theoretical framework is to enable research findings and so on have long-lasting significance and utility.

2.1   FUNDAMENTAL CONCEPTS AND THEORIES

Efforts directed on problems of economic development have had one discouraging result; it has produced an ever lengthening list of factors and conditions, of obstacles and prerequisites. The direction of the enquiry has also proceeded from thoroughly objective, tangible, and quantitative

phenomena to more and more subjective, intangible and immeasurable ones.

For a long time, natural resources held the centre stage when chances of a country's development were considered. Later on, capital, a man-made and quantifiable entity, came to be considered the principal agent of development. However, "among the proximate causes of economic development, the supply of entrepreneurial and managerial abilities now occupies a position of pre-eminence at least equal to that of capital", says United Nations (1955:30-38). Notwithstanding, the contribution to be derived from "nonconventional inputs" such as investment in people as productive agents and the introduction of improved techniques not embodied in physical capital goods has also been stressed, Schultz (1956:11).

If one turns to the conditions that indirectly determine development by their influence on the supply of capital, entrepreneurship, and skills, the spectacle becomes far more bewildering. It is usual at this point to list the need for minimum standards in public order, law enforcement, and public administration.

In attempts to dig more deeply, economic historians and sociologists, starting with Max Weber, have identified a number of beliefs, attitudes, value systems, climates of opinion, and propensities which they have found to exert a favourable influence on the generation of enterprise (investments) and of developmental initiative.

In a nutshell, investment environment should encourage capital accumulation in specific activities while at the same time encouraging capital formation without specific intent.

Broadly defined, investment is any activity undertaken to change and hopefully to improve economic well-being of a country. It is important to note that the driving force in investment decision is the search for returns; it is the expected returns that will influence the decision to invest, whether by local or foreign investors. It is also important to remember that investors have options for investment destinations. This implies that the choice to invest in a particular country depends on relative returns in that country.

2.2 INVESTMENT THEORY

Since the Great Depression in the 1930s, scholars and economists have developed investment theories to assist planners and politicians in economic development. According to Anatol Murad, the 20th century witnessed the evolution of numerous economic theories: Keynes Theory of investment was popular in the 1930s and mid 1940s; Accelerator Theory in the 1950s and 1960s; Classical Theory in 1970s and Tobin Q Theory in the 1980s. These theories, along with the Foreign Direct Investment Theory are still in use in many countries and are being promoted by the World Bank Structural Adjustment Programmes, according to Pond (1997:18). Some of these theories are discussed below.

2.2.1 Keynes Theory (1936): According to Keynes, investment is determined by the marginal efficiency of capital. The rate of interest influences the marginal efficiency because it reflects the opportunity cost

of invested funds. Keynes argued that private investments are driven by "animal spirits" because it is extremely difficult for private investors to make any rational assessment of returns to their investments.

2.2.2   Accelerator Theory (1950s and 1960s): According to this theory, investment is simply a linear function of changes in output. This approach makes it easy to compute the level of investment on the basis of the incremental capital-output ratio. But accelerator theory suffers from many defects because it fails to incorporate the role of the expectations, profitability and the cost of capital. Although the acceleration principle has been widely used to explain investment behaviour, overall it has been found to be unsatisfactory, admits Yergin and Stanilaw (1999).

2.2.3   The New Classical Approach (1970s): This theory assumes that the optimal level of capital stock is a function of output level and the user cost of capital. The user cost of capital is influenced by the depreciation rate, price of capital goods and the interest rate. The current and desired levels of capital stock differ because of delays in making deliveries as well as lags in making investment decisions. The approach has been found inadequate in explaining investment practices because it assumes outputs are exogenous; assumes perfect competition and static expectations.

2.2.4   The Q Theory of Investment: This theory is associated with James Tobin. The argument is that investment is undertaken on the basis of relationship between the value of the firm after installing an additional unit of capital and the replacement cost of the additional unit of capital installed. If installing an additional unit of capital increases the market

value of the firm relative to replacement cost then the firm will increase its existing capital stock, and vice versa. Because it is very difficult to measure the marginal Q, most studies compute the average Q, which is simply the market value of the firm's existing capital stock, divided by its replacement cost. The use of Tobin Q has been criticized because it assumes increasing installation costs (this may not be true for lumpy investments) and that firms are able to sell all they want. If anything, dis-investments are very costly; it is less costly for firms to increase investment than to disinvest. Shah and Roadway (2000:42).

2.2.5   Current Theories: These are based on modern principles of management and lay emphasis on the links between risk, uncertainty and irreversibility of some investments. The argument is that risk factors negatively affect irreversible investments because firms fear to invest only to lose virtually all their investment due to high cost of dis-investment. There is also growing literature on how financial constraints such as interest rate ceiling or credit rationing influence investment. Because of information asymmetries, internal finance and external finance cannot be taken as substitutes as lenders in markets cannot accurately ascertain the quality of investments for which firms seek to borrow. Consequently, "this raises the cost of external finance relative to that of internal finance," says, Laffer and Miller (2004:83-85)

2.2.6   Theory of Foreign Direct Investment (FDI): This theory holds that the decision to invest is a function of the expected returns. Thus, FDI is likely to take place if a foreign country offers opportunities which are more profitable relative to the home countries. The potential for high returns must be emphasized as a major driving force; foreign investors are

not motivated by charity but by expected returns. The returns are in turn influenced by host factors including political stability, macroeconomic stability and the cost of doing business. The cost of doing business is influenced by infrastructure (roads, energy, etc), licensing procedures, taxes, and the quality and cost of labour. Assuming everything else remains equal, investors will favour those countries where costs are relatively lower, according to Laffer and Miller.

Another factor that influences the FDI is the world trading system as expressed in World Trade Organization rules. FDI in some countries was encouraged by protectionists policies that were in place. The current movement toward free trade suggests that foreign investors need not shift their investment from home countries as they can sell freely from their home basses. However, there is evidence that free international trade is not necessarily a barrier to FDI because some countries with liberal trade policies continue to attract substantial FDI.

Short-term determinants of FDI include changes in host countries' interest rates, changes in asset prices, growth prospects, and economic environment in FDI source countries. In the long-run, determinants of FDI include: natural endowments, policy environment, supply of human and physical capital, infrastructure, and access to intermediate or final goods markets. It is however, important to note that unlike portfolio flows which are subject to financial shocks and therefore very volatile, FDI flows are less volatile since they involve large, fixed, non-liquid investments which make dis-investment extremely difficult.

According to the World Bank (1999:2), the countries which received the largest share of FDI flows are characterized by: open policy regimes; large markets; and high income. Advancement in communication and transportation technologies are also associated with increased FDI flows as they facilitate across-border investments.

The decision to invest in other countries is of course a function of many factors. These factors include: the expected streams of earnings; the risk factor-political risk, economic risk; macroeconomic stability. Other important links between sovereign and FDI include: corruption versus investments; economic freedom versus investment, and political uncertainty versus investment.

The quantity and quality of investment that takes place in a country, as well as its effectiveness in generating growth, is influenced by the overall policy and institutional environment, both present and expected. The environment, often referred to as the investment climate, includes several interrelated dimensions:

- political and macroeconomic stability as well as open investment and trade regimes are critical;
- effective and transparent regulatory environment;
- corruption free business environment and more generally good governance is important; and finally
- the quality and quantity of physical infrastructure, such as power, transport, telecommunication, water and financial services are important elements of the investment climate.

2.3   SAVINGS AND INVESTMENT

In a free market economy, savings are automatically matched with investment. Decisions about savings and investment in capital processes are often made by different actors. Investment decisions are made by entrepreneurs and businesses, whereas savings decisions are often made by people and households.

The link between these independent actors is the interest rate. When interest rate rise, people will save more. When interest rates fall, more potential projects become economic, so businesses and entrepreneurs invest more. In a free market, interest rates rise and fall to clear the market and ensure that savings are matched by equivalent investments.

Banks often act as intermediaries between savers and producers. Savers deposit their spare wealth with the bank and receive interest. Producers borrow from the bank to purchase capital goods to increase productive capacity of their business. Their increased productivity improves living standards for everyone.

This all goes wrong when governments give their central banks authority to set interest rates. A central banker does not know the future, so he does not know or have enough information to set the interest rate. Following the dotcom crash in 2000, central banks pushed interest rates down, leading to the housing boom and following credit crunch.

2.3.1   Consequences

Artificially low interest rates cause dislocation in the economy. Households respond by reducing saving and increasing consumption (for

most households, a car and a home are consumption goods and not investment goods).

Big spending on consumption goods makes people feel good, but it cannot last forever. When interest rates go up again, personal debt becomes a burden and interest payments take an ever greater share of disposable income. Households are forced to reduce spending on consumption goods to get their balance sheets back in shape.

When the demand for consumption goods decline, businesses have to cut back on the production of consumer goods. Ideally, the resources that are no longer needed to produce consumer goods should be switched to the production of investment goods. If this does not happen, the economy will decline as the resources that previously produced consumer goods will be underemployed.

Unfortunately, two things have happened that make this shift in resources impossible. Firstly, there is no additional savings available to fund any new investment expenditure. Although households have reduced their expenditure on consumption, their surplus income does not go into savings. Most of it goes toward payment of interest. Any surplus not used on interest is not available to fund additional investment, because it must go towards repayment of debt. Although there has been a decline in consumption, there are not additional savings to fund the purchase of new investment goods.

2.3.2 Producers

The second problem is that when interest rates were set artificially low by the central bank, producers took this as a signal to buy more capital goods. They have already purchased more capital goods than is required for a properly functioning economy. Just as households responded to low interest rates, by overspending on consumption goods, business responded by excessive spending on capital goods.

When demand for consumption goods declines and resources should be moving towards the production of capital goods, the demand for them also dries up, because businesses have already overspent on investment goods. Just when spare resources are freed up for the production of investment goods that would benefit the entire economy, businesses are trimming their investment plans to tidy up their balance sheets.

Fiddling with interest rates causes the relationship between consumption and production and saving and investment to get out of sync. The economy will go into recession, as demand for both consumption and capital goods declines at the same time.

This is the decline in aggregate demand that is dreaded by many modern economists. What they do not seem to understand is that this lack of demand is the consequence of the distortion caused by the actions of the central bank. Artificially low interest rates create excessive demand for consumption and capital goods that cannot be sustained. Something eventually has to give, and it hits both consumption and investment at the same time.

Modern economists advocate additional government spending to artificially stimulate demand, but this just perpetuates the dislocation of the economy

2.3.3   Three Classes of Business

When the central bank sets interest rates artificially low, a credit fed boom will follow, as households reduce saving and make more purchases using credit. Assets rise in price as the cost of borrowing declines. When the credit-fuelled boom comes to an end, businesses can be classified into three categories.

A. Some businesses will have expanded to be far larger than they would be if interest rates had been determined in a free market economy.

B. New business will have emerged that would not exist were it not for low interest rates and the credit-led boom. Their aggressive growth often fuels the boom.

C. Some businesses that would be economic in normal times will have shrunk after being squeezed out by other businesses chasing the boom. Hopefully this is still the largest category.

This suboptimal situation cannot continue indefinitely. It reflects the dislocation of the economy caused by artificially low interest rates. To correct this situation, households will begin cutting back on their purchases, and saving hard to reduce their exposure to debt. Businesses in categories A and B that have been selling to people on credit will have to stop producing stuff that is no longer needed. As they cut back production, staff will be laid off, increasing unemployment and further reducing the demand for goods and services.

Mainline economists say that best solution is for the government to increase expenditure to keep businesses in category A and B operating at their current levels. Businesses in category C will be unable to meet the demand for what they are producing.

For the economy to operate in an optimal way, free from distortions caused by government intervention, we really need businesses in category B to disappear and business in Category A to eliminate the production driven by the low interest rates. At the same time, we need businesses in category C to expand their production to the optimal level. Alternatively category A and B businesses could start producing the things produced by category C, if they could do it as efficiently.

The problem with the standard solution is that extra government expenditure just keeps businesses in category A and B doing what they were previously doing. That does not get the economy to the optimal situation. It may get businesses in category C producing more too, but not enough, because they would still be getting squeezed out.

The solution proposed by mainline economists just perpetuates the problem. It may prevent short term economic decline, but it results in long term sub-optimal performance.

2.3.4   No Easy Exit

The painful solution is for the government to do nothing and let the dislocation work its way out of the economy. Unfortunately, if the dislocation has been really severe, businesses in category A and B will have to make massive cuts in production. This will lead to high levels of

unemployment that reduces demands for the output of business in category C. Category A businesses will shrink more than is necessary. Category C businesses, which should be the majority, will have to reduce production, when we really need them to increase production.

The painful solution is better in the longer term, as it allows the economy to move towards an optimal use of capital. This is the correct solution, but it may be very painful in the short. Very few people will choose short term pain for long term gain, so few governments will choose this particular solution.

I am not sure about which is the best policy. The short term pain of the correct solution may be so awful, and we are so grossly unprepared to deal with tough times, that we might be best not to go there yet. We might be better to live a while longer with suboptimal economic performance until we are ready to deal with real and costly change.

Of course, the best that governments can do is postpone any adjustment. We will have to face the day of reckoning eventually.

The real moral of the story is that getting into a situation where the only choice is between painful medicine and medicine that does not work well is foolish. Allowing central banks to distort an economy by manipulating interest rates is a journey down a "no exit" road.

2.4 THE RELATIONSHIP BETWEEN SAVING AND INVESTMENT

An economic consultant and former Associate Professor of economics McGregor (2011) bares his thoughts through one of the points that

emerged from the discussion in their programme 'The Paradox of Thrift'. That while saving is undeniably an important part of the economic process that gives rise to new investment and economic growth, the precise relationship between saving and investment is somewhat complex. This helps to explain why there are differences of judgement as to what is a satisfactory national saving rate.

Here they try to unravel the elements of the puzzle, and to clarify some of the macroeconomic issues that underlie the saving debate.

2.4.1   The Components of Aggregate Saving

For this purpose it is helpful to introduce the concept of the Gross Domestic Product (or GDP), and some elementary associated national accounting relationships. The GDP is simply a measure of the country's aggregate rate of production of final goods and services over a specified period. (It is from changes in GDP that we calculate the national rate of economic growth that is so often cited by politicians). The millions of commodities included in the GDP may be classified in various ways.

A widely used system of classification distinguishes between consumption goods and services, C (which includes such things as food, clothing, cars, refrigerators and haircuts purchased by households); private sector investment goods, I (which includes such things as plant and equipment and inventories purchased by the business sector, as well as residential housing purchased by households); goods and services purchased by the government sector, G; and net exports, NX (the difference between exports and imports of goods and services). We may consider net exports a proxy for the balance of current account in the balance of payments.

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On this basis, then, we can represent the (real) GDP for any period as a sum of these components:

(1) $GDP = C + I + G + NX$

The process of production generates not only a flow of outputs of goods, but also a flow of incomes to those participating in the process. Since, in general, every dollar of production generates a dollar of income, it follows that the real GDP of a country reflects a corresponding flow of aggregate real income in that country, according to McGregor.

Thus aggregate output and income are essentially equivalent measures of aggregate economic activity. Leaving aside some refinement of detail associated with international transactions, all of the income generated in any period is attributable to the household sector, since the owners of firms (whose income takes the form of profits) are of course themselves also part of that sector.

The incomes received by households may be categorised into the part that they spend on consumption goods, the part that they save, and the part that they are required to pay in taxes. Thus aggregate income may be represented as a sum of consumption (C), saving (S) and taxation (T). Bearing in mind that we can represent aggregate income by GDP, we can summarise the components of income as:

(2) $GDP = C + S + T$

Now we may combine our definitions of aggregate output and aggregate income in equations (1) and (2), to get:

(3) $C + I + G + NX = C + S + T$

This may be rearranged as:

(4) $I = S - (G - T) - NX$

This important national accounting relationship gives us the key to much of the discussion in The Paradox of Thrift concerning the macroeconomic significance of the national saving rate. For it defines, in the three terms on the right hand side, the sources of saving from which aggregate investment can be financed.

The first is domestic private sector saving, S (that is, saving by households and business enterprises). The second is public sector saving, represented by the government budget deficit, or the difference between government expenditure and tax revenue, (G-T).

The third source of saving is the foreign sector. By the logic of our international economic relationships any net borrowing from the rest of the world implies a corresponding current account deficit. Thus our utilisation of foreign saving is represented here by net exports, NX. It is important to note that, in principle, any of these saving flows may be positive, zero, or negative.

2.4.2 Saving, Investment and Foreign Debt

It is clear now that some of the confusion about the relationship between saving and investment derives from the fact that there are several kinds of saving to be taken into account. Total saving is made up of a domestic component and an international component, either of which may be positive, zero or negative. Domestic, or national, saving comprises the

saving of the private sector, S, and the saving of the government sector (G-T).

McGregor further asserts for instance, "If the government sector is in deficit, as in Australia it typically has been over the period since the Second World War, then the government is dissaving and contributing negatively to aggregate domestic saving". We can see then that under those conditions if indeed the national saving rate is thought to be too low, the government itself must share the responsibility for this, and any attempt to correct the problem can have important budgetary implications.

Recognition of this point has been implicit in the widely-publicised strategy of the Australian government to transform the Federal Budget from deficit to surplus. It also helps to explain the Labour government's flirtation with surplus budgeting in the late 1980s and early 1990s.

As McGregor earlier noted, reliance or otherwise on foreign saving is reflected in net exports. If NX is negative, indicating a current account deficit, then foreign lenders are contributing to the flow of saving available to sustain that domestic investment, thereby enabling them to spend in excess of their income. "This has been chronically the situation for Australia for some decades, and is a point of some concern for Dr Fitzgerald in The Paradox of Thrift", he concludes.

Nothing in the foregoing discussion overrides the basic textbook proposition that saving must equal investment. But it is evident that the proposition needs to be interpreted with some care. It holds only in a global, not in a national sense. If we are investing, then the saving to fund

that investment must be coming from somewhere. But it need not be coming from the private sector, and it needs not be coming from home.

Nationally, therefore, the relationship between saving and investment can be virtually anything, depending on whether we are increasing or decreasing our indebtedness to the rest of the world. This is presumably the technical basis of Professor Harper's dismissal of the significance of the national saving rate as an influence on national economic growth and prosperity.

So the key underlying macroeconomic issue in the saving debate is not whether it is possible for investment to proceed in the face of a relatively low rate of national saving, but whether it is desirable (or even feasible), on a long term basis, to cover a shortfall between national saving and national investment by drawing on the saving of foreigners. However, views on this issue will be coloured by a number of considerations, including whether it is the public or the private sector that is accumulating the foreign debt, whether the investment projects are economically and socially viable, and whether we think heavy reliance on foreign lending makes us unduly vulnerable to global volatility.

2.5 THE MISUNDERSTOOD RELATIONSHIP BETWEEN SAVINGS AND INVESTMENT

Kroeger (2011:26) approaches the issue of this misunderstanding from the United States of America (USA)'s perspective. Here, the word 'Fed' means their Federal Reserve Board. If you ask an economist to explain the relationship between savings and investment, he will likely refer you to the model of the loanable funds market that classical theorists put together

long ago. They would mention that there is a supply of loanable funds and a demand for those funds and that the market price of those funds (the interest rate) is ultimately determined by the changes that occur in those two key variables, he claims. If, for example supply increases relative to demand, the interest rate will drop. If demand increases relative to supply, then the price will go up.

In the classical model, the demand for loanable funds comes from firms that want to use them for economic investments that will improve economic efficiency. The supply of loanable funds comes from the savings of households. With this model in mind, economists have typically pointed out that an increase in savings will increase the supply of money available for lending relative to demand, forcing interest rates down, which makes borrowed money more affordable for firms. Conversely, a reduction in savings when demand is constant or growing would force interest rates up, making funds for firm investments prohibitively expensive.

When they are taught this conceptualization of the money/capital market, according to Kroeger, economists are [implicitly] constrained to embrace several key assumptions:

- Firms always have economic efficiency projects they would invest in if only there were enough loanable funds available at an affordable price.
- All money borrowed by firms is used for economic investments
- All economic investments by firms are financed by borrowed money and therefore by savings
- All saved money is borrowed by firms

- All money borrowed by firms comes from saved money

These assumptions are said to be "close enough" to the truth that we can rely on them to give us an accurate understanding of the money market and the crucial role that savings plays in our economy. Unfortunately, nearly all of these assumptions are flawed, according to Kroeger.

Empirical evidence, Kroeger insists, reveals that:

1) Between 1988 & 1997, an average of nearly 85% of the money that corporations spent on investment came from retained earnings or other internally generated funds.

   This empirical fact would seem to strongly refute the assumption that firms are desperately dependent upon borrowed money (and therefore upon savings) when they want to make investments. What is the ultimate source of the internally generated funds? It would be the expenditures of consumers and firms and government, <u>not savings</u>.

2) Between 1998 & 2001 (years that included cyclically high levels of business investment) the combined borrowing of non-financial corporations and all non-corporate businesses varied between 20-34% to total borrowing nationwide. During the same period, the household sector of the economy accounted for 20-30% of total borrowing.

   These statistics show that only a fraction of total savings is directed, ultimately, to the noble purpose of improving economic efficiency. Much of the money that is saved is ultimately spent on consumption

(e.g., credit card and instalment purchases). If firms find that interest rates are too high, is it necessarily because there is a shortage of savings, or is it perhaps because lending institutions are quite happy to starve the supply-side of the economy if they can get higher yields by lending to people for their consumption desires?

3) Savings are not the only source of loanable funds.

   The ultimate determinant of the supply of loanable funds in the U.S. economy is the Federal Open Market Committee of the Federal Reverse System. Whenever The Fed buys securities in the open market, it pays for them with money that it creates out of thin air with a keystroke. It does not draw the money from some reserve account that is limited in size. It is "new money" that did not exist prior to the keystroke that created it. With any of its purchases of securities, The Fed provides loanable funds to banks that were not saved by any saver, Kroeger explains.

This gives us a profoundly different investment equation. Instead of the equality **Investment** = **Savings** that is taught in most economics classrooms, a more accurate description of the loanable funds market would be **Investment = (some % of Savings not used for Consumption) + (the corporate earnings that finance 85% of Corporate Investment) + (newly created money by the Fed deposited in banks).**

There is no limit to the amount of money The Fed can inject into the loanable funds market. If savers were to suddenly pull most of their money out of banks and put it under their mattresses instead (equivalent to a dramatic reduction in savings). The Fed would still be able to easily

maintain the supply of loanable funds or even increase it by simply buying every sort of debt instrument offered in the credit markets. Even if The Fed bought up all of the nation's debt---something that would never happen---and there was still a shortage of loanable funds, it could maintain/increase the money supply by buying buildings or land or anything else it fancies.

In a booming economy, at some point The Fed will begin to panic about the prospect of inflation as unemployment approaches zero. It will want interest rates to increase to discourage the spending of borrowing money. That is something they would expect would happen if people started to save less. But the Fed does not want people to save less in this situation because that would mean that they are spending more, which is the very thing that The Fed does not want. This is not a conundrum for The Fed, however, because it can withdraw loanable funds from the market by either selling securities or by increasing the Reverse Ratio. These actions will drive up interest rates no matter what happens to the savings habits of households, argues Kroeger.

In light of these facts, it is quite irrational for economists to insist that interest rates are influenced in any significant way by savings levels given The Fed's known capabilities and its proven ability to control the money supply (interest rates) no matter what the level of savings. Changes in savings do nothing more than simply determine how many securities The Fed is going to buy or sell to maintain the supply of loanable funds at the level it desires. "Firms never face a shortage of loanable funds in the U.S. unless that is what The Fed wants. We can be absolutely certain that The

Fed will cheerfully reduce the supply of loanable funds available to firms any time it believes inflation is threatening", according to Kroeger.

A correct, empirically-based understanding of The Fed's role in credit market leads one logically to the conclusion that the primary argument Supply-Siders have always used to justify tax cuts for wealthy citizens is actually quite spurious. If interest rates are ever too high, it isn't because there is too little money being saved in the economy; it's because The Fed has intentionally reduced the supply of loanable funds in the economy to ensure that interest rates will be "too high". If savings levels are dropping, but the Fed still wants interest rates to remain low, it would simply buy Treasuries in the bond market---increasing the supply of loanable funds---until interest rates are as low as it desires.

One thing certain to remember is that it is economic investment that is sacred in the U.S. economy, not the practice of saving money. They are not the same thing. Many economists frequently refer to saving as *pure goods* that the economy can never get too much of, but they are mistaken. The simple economic truth that should be apparent to all is that there are certain times (full-employment economy) when greater aggregate savings is a virtue and other times (unemployed resources) when it is quite the opposite. "No, we are not saying that saving money is a great evil that needs to be stamped out. We are simply saying that policy makers need to be aware of the serious damage that excessive saving can inflict on the economy and be prepared to reduce those excesses when they occur," declares Kroeger.

2.5.1 Saving and Savings

Saving has been taken as the excess of income over consumption. This is a way of acquiring assets; for the economy as a whole it is the only way, since while individuals may gain or lose assets through inheritance or gambling, these cancel out in aggregation. The average propensity to save is the ratio of savings to income; the marginal propensity to save is the proportion of any addition to income that is saved. The interest elasticity of saving measures the proportional response of savings to changes in interest rate.

Saving and savings are words which have caused great confusion in economics, as they are used to cover a number of different, through related, concepts, concerned with acquiring assets and ways of holding them, Saving is a flow; savings refers to stocks of assets and ways of holding them. 'Life savings' are a stock of assets built up by past savings. 'Saving up' for things means acquiring assets temporarily with the intention of spending them at some time in the future. 'Small assets' are the assets of people who are assumed not to have many. 'National savings' are for instance, United Kingdom government securities with their income and capital value guaranteed by the state; the amount any individual can hold is rational. 'Savings banks,' for example, the Trustee Savings Bank (UK), are banks specialising at least initially in handling small savings. While saving and savings are related, they do not precisely correspond. 'Contractual saving' means payments such as mortgage repayments or pension contributions which are fixed for some period ahead of contract. A person's contractual saving may constitute net saving, but not if it is financed by running down other assets or by borrowing. Conversely, while

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savings must be held in some form of asset, people can and do save without committing themselves to hold assets of any particular type.

Savings is contrasted with investment, the creation of real assets. Savings and investment for the economy as a whole must *ex post* be equal (on consistent definitions). They are not, however, necessarily equal either *ex post* or *ex ante* for any particular individual, firm or government. The IS curve in macroeconomics (see Table 2-3) shows the combinations of income levels and interest rates at which aggregate *ex ante* savings and investment are equal.

The Theory answers the question, what proportion of income should be saved and invested? There is a trade-off between present consumption and future growth: more consumption now means a lower marginal utility of consumption now, but less investment means slower growth of output, which limits the rate at which consumption can grow in the future. Optimum savings theory suggests that in a competitive economy the time-path of aggregate consumption should be chosen so that the marginal utility of consumption decreases over time at a rate equal to the marginal product of capital.

There is argument that a rise in the *ex ante* propensity to save, that is, the share of incomes that people want to save, may not increase the *ex post* level of savings and investment in the economy, which may in fact decrease. Advocates of this view argue that in a depressed economy attempts to save more from present incomes reduce consumption and thus income levels. If this were the whole story, *ex post* savings and investment would not change. They go on, however, to argue that the fall in incomes

discourage investment, so that *ex post* savings and investment actually fall: this is the *paradox of thrift* once again. The opposing argument says that in a prosperous economy, at any given income level, having more savings available makes it either easier or cheaper to borrow to finance investments: the fall in consumption thus 'crowds in' investment so that *ex post* incomes are unchanged and savings and investment rise. The arguments for and against the paradox of thrift each appear to be capable of being correct in some circumstances which actually applies in any particular situation is a matter of fact.

2.6 THE LINK BETWEEN SAVINGS AND INTEREST RATES: A Key Element in the Tax Policy Debate.

"If the supply-side revolution" in economic thinking did anything, it highlighted the interplay of the fiscal system with people's day-to-day financial decisions. Taxes, subsidies and tariffs all create incentives that can influence how much a person buys and sells, works and plays. And knowing this, policy makers have become more aware of the consequences that their revenue measures have for individual behaviour, declares DeFina (1984:88-104).

So it is with the amount that people save. As things stand now, several elements of the U.S. tax code, for instance, reduce the rate of return that savers earn, the reward for postponing today's spending. Understandably, policy makers are concerned that the government-created reduction in the real (inflation adjusted) returns stacks the deck against thriftiness and thereby stunts the private sector's contribution to the nation's pool of

savings, according to DeFina, who was a senior economist at the Stanford University.

Saving is, of course, crucial to a growing economy because it makes resources available for the production of physical capital and for the research and development needed to fuel economic growth and enhance peoples' standard of living. Coupling this important role of saving with the anxiety of policy makers, it is not surprising that the U.S. legislators backed tax reforms aimed at eliminating perceived anti-saving biases in the code. These proposed reforms include sweeping changes such as substituting taxes on consumption for the present income tax, as well as piecemeal adjustments such as granting tax deferred status to certain forms of saving.

Unfortunately, the push to amend the tax structure, while well-intentioned, is curiously premature from an economic perspective. To be sure, the income tax unquestionably reduces the reward to savers, a fact that gives legitimate cause for concern. Nonetheless, available evidence suggests the presumption of a sizable negative saving response to such a reduction in the real return may be unwarranted, however intuitively appealing that key assumption might be.

2.6.1 Saving and Real Interest Rates: What do Economists Know?

In order to systematize their thinking about what influences saving, DeFina alleges that economists have developed behavioural models of the "typical" individual. Although these models generally focus on spending behaviour, saving behaviour is described simultaneously. The reason is

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that once a person's spending is determined, his saving can be calculated simply as his unspent income. This only reflects the obvious that spending and saving are opposite sides of the income coin.

The conventional framework used by economists envisions people as long-run, or life-cycle, planners who consider not only today's economic conditions but also expected future conditions when scheduling their spending plans. Moreover, the framework views individuals as free to borrow and lend. An important implication of this freedom is that people's current spending is not constrained by their lifetime earnings, or "human wealth", as it has been called. It may be noted here that people's wealth takes a variety of forms, including stocks, bonds, and property in addition to human wealth. For the purpose of this discussion, we confine our attention to human wealth for consistency with the conventional framework employed by economists and for ease of exposition. Nonetheless, the basic life-cycle model can be amended to incorporate nonhuman wealth, such as stocks etc. as mentioned above, with no substantive implications for the following views. However, such models essentially argue that individuals prefer a smooth pattern of consumption over their lifetimes, with consumption (c) in each period equal to some proportion (a) of their total wealth (w). In other words, c = aw.

How does the rate of return to saving get into the picture? Asks Steindel (1980:101-14) who marshalled out a lucid mathematical exposition of the points under review. As it turns out, the rate of return is important in the spending/saving decision because it influences both the proportion of one's wealth that a person consumes in the current period and the amount of an individual's lifetime wealth. The rub is that the rate of return affects

the determinants of spending in offsetting ways. As a result, the net impact on spending due to a change in interest rates is conceptually indeterminate. Appeals have been made to empirical analysis in an attempt to arbitrate this ambiguity, unfortunately such appeals have been answered with results that buttress several competing views.

Theoretically Anything Goes... In theory, a change in the rate of return can influence the fraction of wealth going to today's spending through two channels. The first is by changing the relative financial attractiveness of spending and saving. One motivation for putting off today's spending is that it yields a reward. That reward takes the form of even greater consumption in some future period by forgoing, for instance, a dollar of spending today, a person can enjoy more than a dollar's worth of spending in the future. How big an increment do individuals receive? They receive an amount equal to the real, after-tax interest rate for each dollar of present consumption they postpone. For example, if a person in the 30 per cent tax bracket receives a real return of 10 per cent on her saving, her after-tax rate of return is 7 per cent $\{(1.3) \times 0.1 = 0.07\}$.

Technically, one cannot simply discuss the effect of a change in interest rates on saving without first specifying the way in which the change comes about. The present discussion may be thought of as referring to a change in interest rates arising from a switch from an income tax to a consumption tax, where each tax is set to raise the same amount of revenue. Moreover, the present discussion considers only so-called partial equilibrium effects, excluding the impact of the change on other markets and prices and subsequent feedback. In a sense, consumers can be bribed, according to DeFina, to refrain from indulging in the pleasures of spending today with

the promise of even greater spending tomorrow. And quite naturally, the higher this bribe or reward, the more willing people are to exercise spending restraint. So, from at least one angle it appears that the tax-induced reduction in the return to saving would increase the fraction of wealth that is spent today. Or, in other words, the lower returns means less saving.

The story does not end there, however. Indeed, people have another motivation to save, namely, to accumulate funds to meet payments that would otherwise strain current period income. And in this case, a lower return would spark more, not less saving, says Steindel.

To see why, imagine an individual who, at the beginning of the year, is trying to accumulate $4,600 by the end of year in order to meet a law school payment. Assume that the person already has $4,000 in a bank account and that the after-tax interest rate is 10 per cent. Under these circumstances, this individual will hit target of $4,600 by saving $200. At year end, he will have the $4,000 he has already saved plus the $400 in interest earned on it ($4,000 x 10%) plus the new saving of $200 which equals $4,600. But suppose the after-tax return falls to 8 per cent from 10 per cent. Now, if he decides to save $200, this individual will fall short of his target by $80 because his interest income will decline to $320 ($4,000 x 8%) from $400 in order to reach his year end goal of $4,600 with the lower rate of return; then, he must increase his new saving to $280 from $200.

Although this discussion relies on a particular example, the conclusion holds in general. Whether they are seeking away money for retirement, for

their children's education, or for a weekend luxury Amusement Park retreat, "target" savers will respond to a reduction in the rate of return by boosting their saving. That is, by decreasing the fraction of lifetime wealth consumed today. In that way, they compensate for any prospective shortfall due to reduced interest earnings on their existing accumulation of saving.

In addition to the two conflicting ways in which interest rate changes affect the proportion of wealth spent in the current period, movements in the real return can alter saving in a third way, by changing the value of wealth available for spending and saving. Notably, this avenue has been neglected in many earlier discussions of the relationship between interest rates and savings. However, both Charles Steindel, "The Determinants...", and Lawrence Summers, "Tax Policy...", can be credited with highlighting the importance of this channel.

As earlier mentioned, individuals can be thought of as spending a given proportion of their lifetime wealth each period. It follows logically, then, that an increase in wealth due to an interest rate change increases today's spending and hence, diminishes saving, a decrease in wealth due to an interest rate change has the opposite effect, according to DeFina. It is useful at this point to recall that saving plus consumption equals disposable income. If only wealth changes without an associated income change, then the resulting variation in consumption must be offset exactly by variation in saving. Consequently, if wealth rises, causing current period consumption to rise, current period saving will fall, and conversely. The question of concern to policy makers that remains is: how does a change in the real return alter the value of wealth?

The answer is unequivocal, an increase in real rates of return diminishes wealth while a decrease augments it. Consequently a tax-induced reduction in real rates inflates individuals' wealth, increasing their current period spending and, hence, lowering their saving.

Overall, then, theoretical considerations create a quandary. To recap, a lowering of interest rates influences the amount that people save in three competing ways. Two of these ways, a diminution in the attractiveness of saving relative to spending, and an enhancement of wealth, work to reduce people's saving: the third way, a lowering of the interest earnings of "target" savers, works to boost people's savings. As a result, saving could either rise or fall in response to a drop in real rates, depending on which of the three effects is dominant.

Which effect is, infact, dominant? No amount of theorizing can determine that. Instead, actual data must be brought to bear on the issue. Unfortunately, even empirical analysis has yet to provide a clear answer, claims DeFina.

People generally, have some idea of what their earnings will be during future periods of their life. In measuring human wealth, individuals try to judge how much their future stream of earnings is worth today. That is, each person answers the following questions. "Suppose that I stop working today. How large a lump-sum payment must I receive today to ensure that when I reach retirement age, I have exactly as much money as I would have had if I had continued working".

A crucial element in this determination is the level of interest rates. The reason is that the person will be able to invest his lump-sum payment for

all the years until retirement age. The lower the prevailing level of interest rates, the greater the lump-sum payment that is required to match the future earnings stream, because the less that interest income will augment the initial lump-sum payment. That is, human wealth and interest rates are inversely related.

An example will help clarify these notions. Suppose that a person lives for two periods. In the first period, she earns $100 and in the second period she earns $150. Also suppose that a 10 per cent real return will prevail throughout her working life. Now, presuming that she gets paid at the end of each period and saves all her earnings, she will have $260 at retirement: the $100 earned in the first period, plus $10 interest income on the $100 invested throughout the second period, plus the $150 earned during the second period, equals $260.

What is the human wealth implied by her earning stream? It is the amount that, when invested today for the following two periods at the real return of 10 per cent, will yield $260. Calculation reveals this to be $214.88 at the end of the first period, she has $236.36 after investing the $214.88 at 10 per cent by reinvesting the $236.36 at 10 per cent during the second period, her investment grows to $260.

Computations similar to those above indicate that the lower the interest rate, the higher the person's wealth. For instance, if the real return in the above example were 5 per cent instead of 10 per cent, the person's human wealth would be $231.29 instead of $214.88, if the real return were 2 per cent, human wealth would be $242.21. Although the focus here is on

numerical examples, the essential point will always be true, namely, that human wealth and interest rates are inversely related.

Empirical Estimates: Too Hard to Pin Down. A number of researchers have used statistical techniques to measure the historical relationship between households saving and movements in interest rates. A common empirical approach is to implement life-cycle type models of individuals' spending behaviour in an attempt to measure the interest elasticity of saving. This elasticity is a summary measure of the responsiveness of saving to interest rate movements and equals the percentage change in saving due to a 1 per cent change in interest rates. For example, if the elasticity is 0.7, this means that for each 1 per cent change in interest rates (say, from 5 per cent to 5.5 per cent), saving would rise by 0.7 of a per cent (say, from $53 billion to $53.6 billion). To relate this concept to the earlier theoretical discussion, if the amount saved falls as a result of a rise in interest rates, the measured elasticity will be negative; if the amount saved rises as a result of a rise in interest rates, the measured elasticity will be positive, if the amount saved is unaffected by a rise in interest rates, the measured elasticity will be zero.

The results of these statistical studies have been of only limited use to policy makers. The reason is that nothing resembling a consensus on the interest elasticity has emerged, declares DeFina. At one level of the debate, there is disagreement on the qualitative impact on saving of interest rate changes. Although a majority of studies have found that the interest elasticity is positive, implying that a reduction in interest rates lowers saving, a sizable minority find that saving is insensitive to fluctuations in rates (that is, the elasticity is zero). At another level of the

debate, there is disagreement even among those studies that find a positive interest elasticity. Some researchers have estimated that the elasticity is 0.03; that is, for every 1 per cent fall in interest rates, saving falls by 0.03 per cent. Based on the figures for 1983, this implies an inflation-adjusted increase in personal saving of \$16 million for each 1 per cent rise in interest rates. Others have estimated that the elasticity is in excess of 5.0, well over one hundred times as great. So, even if one were to cast one's vote with the majority of studies that argue for a positive elasticity, the magnitude of the elasticity is still very much open for discussion, according to DeFina's position.

In a sense, the disparity in the estimates is not surprising. Any attempt to determine the interest elasticity of saving is fraught with practical and conceptual difficulties. One significant stumbling block, DeFina claims, is that many of the variables needed to implement models of consumer spending are unobservable. A case in point is the real after-tax interest rate. Roughly, the real interest rate is equal to a nominal rate, which can be observed, less the inflation expected during the time period to which the rate applies. The problem occurs because inflation expectations cannot be directly observed; rather, they must be approximated from available data. As yet, economists, DeFina avers, do not agree on the best way of carrying out the approximation. And, the estimates of the interest elasticity vary depending on how the approximation is done. This problem of how best to represent theoretically required variables is not limited to the interest rate; instead it concerns such variables as human wealth, etc. spending as well, Carlino and DeFina (1984:103-13).

Compounding the problems caused by data deficiencies are questions about the appropriate empirical specification of the conceptual model. Although theory gives some guide as to the form of the empirical framework, it does leave room for interpretation. For instance, it is up to the researcher's judgement as to what lags in the relationship between variables that might reasonably be expected, what is the most suitable time period for the analysis, and to what extent special factors, such as labour unrest or civil disorder, terrorist attacks or even wars should be accounted for. Different opinions on these issues can lead to different estimates of the interest elasticity of savings.

Nevertheless to say, the equivocal nature of available results when considered as a group diminishes their usefulness to policy makers. But even if there were unanimity on the interest elasticity of saving, or if there were one study that could be accepted with confidence, this would not solve policy makers' problems. The reason is that historically based estimates of the interest elasticity of saving pose special problems when used to draw inferences about the impact of a policy change, Summers (1982:64-65).

One problem arises from the type of variation in interest rates that is used to infer the interest elasticity. Much of the variation reflected in the data arises from the normal ebb and flow of economic activity. Consequently, any given change in rates is unlikely to persist for an extended period. The continuing shift of economic activity will instead evoke further rate changes that either reinforce or dampen previous fluctuations. In contrast, movements in interest rates that result from a tax change are permanent not transitory in nature. That is, a tax change moves the net return to

savers to a permanently lower or higher level, depending on the direction of the policy adjustment.

Because available evidence depends primarily on the relationship between saving behaviour and transitory interest rate changes, it is of limited use to policy makers. In essence, the data on which the studies rely are inappropriate and can result in misleading estimates. At least one author has argued that this problem, causes an underestimate of the interest elasticity of savings. While the exact nature and significance of the bias may be questioned, this issue at least makes existing findings suspect, warns Summers.

Another difficulty in interpreting previous research results, says Summers, stems from the way in which people's expectations of future economic variables are tied to the fiscal and monetary policies that are in place. In the present context, people's expectations about such things as inflation and future real earnings are important because they influence the amount that individuals save and spend today. The common view among economists is that people's expectations are rational. That is, their expectations reflect the most efficient usage of all available information. If this is so, then it follows that people's present economic decision depends on the particular policy structure or regime that is currently in place. A person who forms expectations rationally cares about existing monetary and fiscal policies, such as the kind of taxes that are levied because they provide clues about the likely future course of economic conditions. This person will, then, use policy information when forecasting variables that influence his or her behaviour.

Why does this limit the usefulness of available studies? Asks, DeFina. The reason is that available statistical analysis are based on observations of people's saving behaviour under a given policy regime. So, while estimates of the interest elasticity of saving might be accurate for the regime, they simply may not apply under a new regime because people's behaviour is likely to change. In other words, it is not legitimate to infer automatically that people's saving will be just as responsive to interest rate changes after policy actions are taken to increase rates of return as before those actions are taken. DeFina, however, notes that the problem of evaluating policy when regimes change of which this is a special case, was first articulated by Robert E. Lucas when he presented *"A critique on Econometric Policy Evaluation"* – A conference series on Public Policy.

This is a relevant concern in the ongoing debate about saving because suggested solutions to the perceived problem entail changes in the fiscal policy regime. An example is the switch from income tax to a consumption tax such as a value-added tax. Statistical techniques to account for this policy-dependence issue are being developed. As yet, however, they have been applied to the interest elasticity question only in a rough-and-ready fashion. Consequently, the associated results are not yet really reliable, declares DeFina.

Empirical estimates of the interest elasticity of saving – the percentage change in saving associated with a 1 per cent change in real rates – vary considerably. The list below summarizes the results of a representative group of empirical studies giving the authors of the study, the date of the study and the corresponding estimate. For example, Boskin's 1978 study

finds that a 1 per cent increase in the real rate of return will increase saving 0.4 per cent.

The following are the authors and their corresponding interest elasticity of saving:

Alan Blinder (1975)	0.03
Michael Boskin (1978)	0.4
Gerald Carlino (1982)	0
Gerald Carlino and Robert DeFina (1983)	0
Thorvaldur Gylfason (1981)	0.3
Dale Heien (1972)	1.8
E. Philip Howrey and Saul Hymans (1978)	0
Charles Steindel (1980)	5.8
Lawrence Summers (1982)	1.3
Lester Taylor (1971)	0.8
Colin Wright (1967)	0.2

Both Steindel and Summers presented a range of estimates of the interest elasticity of saving. In each of their formulations, the value of the interest elastic depends both on assumptions about other parameters in the models and on the particular fiscal policy change that precipitates the interest rate change. The estimates that are listed above are chosen because they reflect each author's judgement about likely values for the other parameters in the model and a policy initiative that substitutes a tax on consumption for a tax on capital income while holding tax revenue constant.

Whether or not a tax system depresses personal saving is an issue of considerable importance. It is certainly true that the tax system lowers the

net return to savers. But from an economic perspective, it is unwarranted to presume that the reduced rate of return ultimately reduces saving, however intuitive that presumption may seem. Neither economic theory nor empirical analysis unequivocally support that view, according to DeFina.

This is not to say that the issue is resolved in favour of the "no-effect" position. Much work remains to be done in refining our empirical understanding of the situation and in clarifying the ambiguity of available evidence. And, until those tasks are completed, policy makers should proceed slowly with costly fiscal reforms. For although there may be other reasonable motivations for wanting to undertake fiscal or even other policy initiatives, our present level of understanding does not lead us to include a perceived bias in the tax code against saving as one of them; concludes DeFina, a former senior economist in the Research Department of the Federal Reserve Bank of Philadelphia.

2.6.2   Saving or Spending?

Somehow in re-echoing the stance of the Manufacturing Association of Nigeria (MAN) regarding saving and going into ventures, a one-time editor of *Washington Monthly* Jonathan Alter, does not believe in saving. Hear his scornful remark: "Somehow a fiction has arisen in recent years that consumer spending is a bad thing; that it's better to save". Sure, he agrees, saving is important when it results in genuine capital formation that can build new factories. But warns: "It doesn't do any good under mattresses or in money markets funds where most ends up in short-term

commercial paper, government securities or other investments that do not produce new plants or provide new jobs".

Alter advocates "spending" is a better idea, especially right now. The only way to get out of the recession and have a permanently growing economy is for people to buy a lot. Increased buying, according to him, means increased orders, which means increased production and increased jobs and growth. Inflation doesn't result from such growth *per se*, a point that people don't seem to fully understand, he argues.

If we're going to have more buying, insists Alter, we need more income. Alter thinks that putting money into productive economy would prevent recession from occurring and regrets that people, especially at the upper end of the scale tend to invest their money in interest. It's not only fairer if you believe in redistributive justice, but smarter if you believe in saving the economy, he concludes.

2.7 INTEREST RATE, CONSTRUCTS AND APPLICATION

An **interest rate** is the rate at which interest is paid by borrowers for the use of money that they borrow from a lender. Specifically, the interest rate (I/m) is a percent of principal (P) paid a certain amount of times (m) per period (usually quoted per annum). For example, a small company borrows capital from a bank to buy new assets for its business, and in return the lender receives interest at a predetermined interest rate for deferring the use of funds and instead lending it to the borrower. Interest rates are normally expressed as a percentage of the principal for a period of one year.

Interest-rate targets are a vital tool of monetary policy and are taken into account when dealing with variables like investment, inflation, and unemployment. The central banks or reserve banks of countries generally tend to reduce interest rates when they wish to increase investment and consumption in the country's economy. However, a low interest rate as a macro-economic policy can be risky and may lead to the creation of an economic bubble, in which large amounts of investments are poured into the real-estate market and stock market. This happened in Japan in the late 1980s and early 1990s, resulting in the large unpaid debts to the Japanese banks and the bankruptcy of these banks and causing stagflation in the Japanese economy (Japan being the world's second largest economy at the time), with exports becoming the last pillar for the growth of the Japanese economy throughout the rest of 1990s and early 2000s. The same scenario resulted from the United States' lowering of interest rate since late 1990s as well as 2007–2012 global financial crisis substantially by the decision of the Federal Reserve System. Under Margaret Thatcher, the United Kingdom's economy maintained stable growth by not allowing the Bank of England to reduce interest rates. In developed economies, interest-rate adjustments are thus made to keep inflation within a target range for the health of economic activities or cap the interest rate concurrently with economic growth to safeguard economic momentum.

In the past two centuries, interest rates have been variously set either by national governments or central banks. For example, the Federal Reserve federal funds rate in the United States has varied between about 0.25% to 19% from 1954 to 2008, while the Bank of England base rate varied between 0.5% and 15% from 1989 to 2009, and Germany experienced

rates close to 90% in the 1920s down to about 2% in the 2000s. During an attempt to tackle spiraling hyperinflation in 2007, the Central Bank of Zimbabwe increased interest rates for borrowing to 800%.

The interest rates on prime credits in the late 1970s and early 1980s were far higher than had been recorded – higher than previous US peaks since 1800, than British peaks since 1700, or than Dutch peaks since 1600; "since modern capital markets came into existence, there have never been such high long-term rates" as in this period. Possibly before modern capital markets, there have been some accounts that savings deposits could achieve an annual return of at least 25% and up to as high as 50%, according to Ellis and Dawes (1957:II-IV).

In the United States, authority for interest rate decisions is divided between the Board of Governors of the Federal Reserve (Board) and the Federal Open Market Committee (FOMC). The Board decides on changes in discount rates after recommendations submitted by one or more of the regional Federal Reserve Banks. The FOMC decides on open market operations, including the desired levels of central bank money or the desired federal funds market rate. Currently, interest rates in the United States are at or near historical lows.

Reasons for Interest Rate Change

Political short-term gain: Lowering interest rates can give the economy a short-run boost. Under normal conditions, most economists think a cut in interest rates will only give a short term gain in economic activity that will soon be offset by inflation. The quick boost can influence elections. Most

economists advocate independent central banks to limit the influence of politics on interest rates.

Deferred consumption: When money is loaned the lender delays spending the money on consumption goods. Since according to time preference theory people prefer goods now to goods later, in a free market there will be a positive interest rate.

Inflationary expectations: Most economies generally exhibit inflation, meaning a given amount of money buys fewer goods in the future than it will now. The borrower needs to compensate the lender for this.

Alternative investments: The lender has a choice between using his money in different investments. If he chooses one, he forgoes the returns from all the others. Different investments effectively compete for funds.

Risks of investment: There is always a risk that the borrower will go bankrupt, abscond, die, or otherwise default on the loan. This means that a lender generally charges a risk premium to ensure that, across his investments, he is compensated for those that fail.

Liquidity preference: People prefer to have their resources available in a form that can immediately be exchanged, rather than a form that takes time to realize.

Taxes: Because some of the gains from interest may be subject to taxes, the lender may insist on a higher rate to make up for this loss.

2.7.1   Real Vs Nominal Interest Rates

The **nominal interest rate** is the amount, in percentage terms, of interest payable. For example, suppose a household deposits $100 with a bank for 1 year and they receive interest of $10. At the end of the year their balance is $110. In this case, the nominal interest rate is 10% per annum. The **real**

interest rate, which measures the purchasing power of interest receipts, is calculated by adjusting the nominal rate charged to take inflation into account. If inflation in the economy has been 10% in the year, then the $110 in the account at the end of the year buys the same amount as the $100 did a year ago. The real interest rate, in this case, is zero.

After the fact, the 'realized' real interest rate, which has actually occurred, is given by the Fisher equation, and is

$$r = \frac{1+i}{1+p} - 1$$

where **p** = the actual inflation rate over the year. The linear approximation

$$r \approx i - p$$

is widely used.

The expected real returns on an investment, before it is made, are:

$$i_r = i_n - p_e$$

where:

i_r = real interest rate

i_n = nominal interest rate

p_e = expected or projected inflation over the year

There is a market for investments which ultimately includes the money market, bond market, stock market and currency market as well as retail financial institutions like banks: talking about market interest rates. Exactly how these markets function are sometimes complicated. However, economists generally agree that the interest rates yielded by any investment take into account:

- The risk-free cost of capital

- Inflationary expectations

- The level of risk in the investment

- The costs of the transaction

This rate incorporates the deferred consumption and alternative investments elements of interest, and takes us to inflationary expectations.

According to the theory of rational expectations, people form an expectation of what will happen to inflation in the future. They then ensure that they offer or ask a nominal interest rate that means they have the appropriate real interest rate on their investment.

This is given by the formula:

$$i_n = i_r + p_e$$

where:

i_n= offered nominal interest rate

i_r= desired real interest rate

p_e= inflationary expectations

The level of risk in investments is taken into consideration. This is why very volatile investments like shares and junk bonds have higher returns than safer ones like government bonds. Risk is a critical factor. The extra interest charged on a risky investment is the risk premium. The required risk premium is dependent on the risk preferences of the lender. If an investment is 50% likely to go bankrupt, a risk-neutral lender will require their returns to double. So for an investment normally returning $100 they would require $200 back. A risk-averse lender would require more than $200 back and a risk-loving lender less than $200. Evidence suggests that

most lenders are in fact risk-averse. Generally speaking a longer-term investment carries a **maturity risk premium**, because long-term loans are exposed to more risk of default during their duration. And, this will take us to issues concerning liquidity preference.

Most investors prefer their money to be in cash than in less fungible investments. Cash is on hand to be spent immediately if the need arises, but some investments require time or effort to transfer into spendable form. This is known as liquidity preference. A 1-year loan, for instance, is very liquid compared to a 10-year loan. A 10-year US Treasury bond, however, is liquid because it can easily be sold on the market.

2.7.2   Market Interest Rate Model

A basic interest rate pricing model for an asset

$$i_n = i_r + p_e + rp + lp$$

Assuming perfect information, p_e is the same for all participants in the market, and this is identical to:

$$i_n = i_n^* + rp + lp$$

where

i_n is the nominal interest rate on a given investment

i_r is the risk-free return to capital

i^*_n = the nominal interest rate on a short-term risk-free liquid

bond (such as U.S. Treasury Bills).

rp = a risk premium reflecting the length of the investment and

the likelihood the borrower will default

lp = liquidity premium (reflecting the perceived difficulty of

converting the asset into money and thus into goods).

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What is commonly referred to as the interest rate in the media is generally the rate offered on overnight deposits by the Central Bank or other authority, annualized. The total interest on an investment depends on the timescale the interest is calculated on, because interest paid may be compounded.

In finance, the effective interest rate is often derived from the yield, a composite measure which takes into account all payments of interest and capital from the investment. In retail finance, the annual percentage rate and effective annual rate concepts have been introduced to help consumers easily compare different products with different payment structures. The spread of interest rates is the lending rate minus the deposit rate. This spread covers operating costs for banks providing loans and deposits. A negative spread is where a deposit rate is higher than the lending rate.

The elasticity of substitution (full name should be the marginal rate of substitution of the relative allocation) affects the real interest rate. The larger the magnitude of the elasticity of substitution, the more the exchange, and the lower the real interest rate. Interest rates are the main determinant of investment on a macroeconomic scale. The current thought is that if interest rates increase across the board, then investment decreases, causing a fall in national income. However, the Austrian School of Economics sees higher rates as leading to greater investment in order to earn the interest to pay the depositors. Higher rates encourage more saving and thus more investment and thus more jobs to increase production to increase profits. Higher rates also discourage economically unproductive lending such as consumer credit and mortgage lending. Also consumer credit tends to be used by consumers to buy imported products whereas

business loans tend to be domestic and lead to more domestic job creation [and/or capital investment in machinery] in order to increase production to earn more profit.

A government institution, usually a central bank, can lend money to financial institutions to influence their interest rates as the main tool of monetary policy. Usually central bank interest rates are lower than commercial interest rates since banks borrow money from the central bank then lend the money at a higher rate to generate most of their profit. By altering interest rates, the government institution is able to affect the interest rates faced by everyone who wants to borrow money for economic investment. Investment can change rapidly in response to changes in interest rates and the total output. The Federal Reserve (often referred to as 'The Fed') implements monetary policy largely by targeting the federal funds rate. This is the rate that banks charge each other for overnight loans of federal funds, which are the reserves held by banks at the Fed. Open market operations are one tool within monetary policy implemented by the Federal Reserve to steer short-term interest rates using the power to buy and sell treasury securities.

Loans, bonds, and shares have some of the characteristics of money and are included in the broad money supply. By setting interest rates, the government institution can affect the markets to alter the total of loans, bonds and shares issued. Generally speaking, a higher real interest rate reduces the broad money supply. Through the quantity theory of money, increases in the money supply lead to inflation. Financial economists such as World Pensions Council (WPC) researchers have argued that durably low interest rates in most G20 countries will have an adverse impact on the

funding positions of pension funds as "without returns that outstrip inflation, pension investors face the real value of their savings declining rather than ratcheting up over the next few years"

From 1982 until 2012, most Western economies experienced a period of low inflation combined with relatively high returns on investments across all asset classes including government bonds. This brought a certain sense of complacency amongst some pension actuarial consultants and regulators, making it seem reasonable to use optimistic economic assumptions to calculate the present value of future pension liabilities… This potentially long-lasting collapse in returns on government bonds is taking place against the backdrop of a protracted fall in returns for other core-assets such as blue chip stocks, and, more importantly, a silent demographic shock. Factoring in the corresponding "longevity risk", pension premiums could be raised significantly while disposable incomes stagnate and employees work longer years before retiring.

Because interest and inflation are generally given as percentage increases, the formulae above are (linear) approximations.

For instance,

$$i_n = i_r + p_e$$

is only approximate. In reality, the relationship is

$$(1 + i_n) = (1 + i_r)(1 + p_e)$$

so

$$i_r = \frac{1 + i_n}{1 + p_e} - 1$$

The two approximations, eliminating higher order terms, are:

$$(1+x)(1+y) = 1 + x + y + xy \qquad \approx 1 + x + y$$
$$\frac{1}{1+x} = 1 - x + x^2 - x^3 + \cdots \quad \approx 1 - x$$

The formulae as used here are exact if logarithmic units are used for relative changes, or equivalently if logarithms of indices are used in place of rates, and hold even for large relative changes. Most elegantly, if the natural logarithm is used, yielding the neper as logarithmic units, scaling by 100 to obtain the centineper yields units that are infinitesimally equal to percentage change (hence approximately equal for small values), and for which the linear equations hold for all values.

2.7.3 Negative Interest Rates

Nominal interest rates are normally positive, but not always. Given the alternative of holding cash, and thus earning 0%, rather than lending it out, profit-seeking lenders will not lend below 0%, as that will guarantee a loss, and a bank offering a negative deposit rate will find few takers, as savers will instead hold cash. However, central bank rates can, in fact, be negative; in July 2009 Sweden's Riksbank was the first central bank to use negative interest on excess reserves, lowering its deposit rate to –0.25%, a policy advocated by deputy governor Lars E. O. Svensson. During the European sovereign-debt crisis, government bonds of some countries (Switzerland, Denmark, Germany, Finland, the Netherlands and Austria) have been sold at negative yields. Suggested explanations include desire for safety and protection against the eurozone breaking up (in which case some eurozone countries might redenominate their debt into a stronger currency).

More often, *real* interest rates can be negative, when nominal interest rates are below inflation. When this is done via government policy (for example, via reserve requirements), this is deemed financial repression, and was practiced by countries such as the United States and United Kingdom following World War II (from 1945) until the late 1970s or early 1980s (during and following the Post–World War II economic expansion). In the late 1970s, United States Treasury securities with negative real interest rates were deemed certificates of confiscation.

Negative interest rates have been proposed in the past, notably in the late 19th century, Gesel (1996:37). A negative interest rate can be described (as by Gesel) as a "tax on holding money"; he proposed it as the Freigeld (free money) component of his Freiwirtschaft (free economy) system. To prevent people from holding cash (and thus earning 0%), Gesel suggested issuing money for a limited duration, after which it must be exchanged for new bills; attempts to hold money thus result in it expiring and becoming worthless. Along similar lines, John Maynard Keynes approvingly cited the idea of a carrying tax on money, (1936, The General Theory of Employment, Interest and Money) but dismissed it due to administrative difficulties. More recently, a carry tax on currency was proposed by a Federal Reserve employee (Marvin Goodfriend) in 1999, to be implemented via magnetic strips on bills, deducting the carry tax upon deposit, the tax being based on how long the bill had been held.

It has been proposed that a negative interest rate can in principle be levied on existing paper currency via a serial number lottery: choosing a random number 0 to 9 and declaring that bills whose serial number end in that digit are worthless would yield a negative 10% interest rate, for instance

(choosing the last two digits would allow a negative 1% interest rate, and so forth). This was proposed by an anonymous student of N. Gregory Mankiw, though more as a thought experiment than a genuine proposal, according to Gesel. A much more simplistic method to ultimately achieve negative interest rate and provide disincentive to holding cash, would be for governments to encourage inflationary monetary policy.

2.7.4 Interest Rate, Inflation and Money Market

A general price increase across the entire economy is called inflation. When prices decrease, there is deflation. Economists measure these changes in prices with price indexes. Inflation can occur when an economy becomes overheated and grows too quickly. Similarly, a declining economy can lead to deflation. Central bankers, who control a country's money supply, try to avoid changes in price level by using monetary policy. Raising interest rates or reducing the supply of money in an economy will reduce inflation. Inflation can lead to increased uncertainty and other negative consequences. Deflation can lower economic output. Central bankers try to stabilize prices to protect economies from the negative consequences of price changes, Bowles (2012:55-60)

Changes in price level may be result of several factors. The quantity theory of money holds that changes in price level are directly related to changes in the money supply. Most economists believe that this relationship explains long-run changes in the price level. Short-run fluctuations may also be related to monetary factors, but changes in aggregate demand and aggregate supply can also influence price level. For example, a decrease in demand because of a recession can lead to lower price levels and deflation.

A negative supply shock, like an oil crisis, lowers aggregate supply and can cause inflation.

2.7.5　　Macroeconomic Models

The AD-AS model has become the standard textbook model for explaining the macroeconomy. This model shows the price level and level of real output given the equilibrium in aggregate demand and aggregate supply. The aggregate demand curve's downward slope means that more output is demanded at lower price levels. The downward slope is the result of three effects: the Pigou or real balance effect, which states that as real prices fall, real wealth increases, so consumers demand more goods; the Keynes or interest rate effect, which states that as prices fall the demand for money declines causing interest rates to decline and borrowing for investment and consumption to increase; and the net export effect, which states that as prices rise, domestic goods become comparatively more expensive to foreign consumers and thus exports decline. In the conventional Keynesian use of the AS-AD model, the aggregate supply curve is horizontal at low levels of output and becomes inelastic near the point of potential output, which corresponds with full employment. Since the economy cannot produce beyond more than potential output, any AD expansion will lead to higher price levels instead of higher output. Table 2 – 1.

The AD–AS diagram can model a variety of macroeconomic phenomena including inflation. When demand for goods exceeds supply there is an inflationary gap where demand-pull inflation occurs and the AD curve shifts upward to a higher price level. When the economy faces higher costs, cost-push inflation occurs and the AS curve shifts upward to higher

price levels. The AS–AD diagram is also widely used as pedagogical tool to model the effects of various macroeconomic policies.

The IS/LM model represents the equilibrium in interest rates and output given by the equilibrium in the goods and money markets. The goods market is represented by the equilibrium in investment and saving (IS), and the money market is represented by the equilibrium between the money supply and liquidity preference. The IS curve consists of the points where investment, given the interest rate, is equal to savings, given output. The IS curve is downward sloping because output and the interest rate have an inverse relationship in the goods market: As output increases more money is saved, which means interest rates must be lower to spur enough investment to match savings. The LM curve is upward sloping because interest rates and output have a positive relationship in the money market. As output increases, the demand for money increases, and interest rates increase. In this example of an IS/LM chart, the IS curve moves to the right, causing higher interest rates (i) and expansion in the "real" economy (real GDP, or Y). Refer to tables 2-2 to 2-5.

The IS/LM model is often used to demonstrate the effects of monetary and fiscal policy. Textbooks frequently use the IS/LM model, but it does not feature the complexities of most modern macroeconomic models, according to Bowles. Nevertheless, these models still feature similar relationships to those in IS/LM.

To re-cap, interest rate is normally quoted in nominal terms. But the real rate has to take into account the inflation rate because the inflation rate reduces the earnings on liquid assets in the money market. For example, if

interest rate is 25 per cent and inflation rate is also 25 per cent, then there is no real return on securities (like treasury bills, deposits, etc.). In general, the real interest rate is given by

$$i_r = \frac{(1 + i_n)}{(1 + p)} - 1$$

where i_n = nominal interest rate and

   p = inflation rate.

For example, if nominal interest rate 30 per cent (i.e. 0.03) and inflation rate is 25 per cent (i.e. 0.25) then, the real interest rate is 4 per cent calculated as follows:

$$i_r = \frac{0.3}{1.25 - 1} = 1.04 - 1 = 0.04 \text{ or 4 per cent.}$$

While inflation rate is excessive and getting close to nominal interest rate, the money market will become depressed because the real interest rate will be too low or close to zero to be able to mobilize deposits and investments in money market instruments.

2.8   INTEREST RATE AND THE PRODUCT MARKET, ETC.

The Product Market is characterized by a negative relationship or downward sloping curve between national income (Y, say) and interest rate (i, say) implying that higher national income is only compatible with lower interest rate. That is, higher national income calls for higher investment expenditure which in turn requires a lower (real) interest rate.

On the other hand, the money market is characterized by a positive relationship or an upward sloping curve between national income and interest rate implying that higher national income is only compatible with

higher interest rate. That is, higher national income requires more money for transactions purpose and more money will be released only if (real) interest rate increases.

Combining the two markets with their opposite tendencies, we find an intersection (or a common combination of national income and interest rate) between the Product Market equilibrium path that is downward sloping and the money market equilibrium path that is upward sloping. The product market equilibrium path is denoted by IS curve. While the money market equilibrium path is described as LM curve. TABLE 2–2 shows the conjunction and intersection of the two curves and this illustrates graphically the general equilibrium of the product and money markets. At such an intersection of the IS and LM curves, the equilibrium national income is Y_e while the equilibrium interest rate is i_e, an equilibrium that is general or common to both the Product Market and the Money Market.

2.8.1   Shifts in the IS curve and the Corresponding Changes in National Income

A shift in the IS curve outwards or rightwards can be caused by expansionary fiscal policy (i.e. increase in government expenditure or a cut in taxes), an increase in labour productivity, or an improvement in technology which shifts the marginal efficiency of investment rightwards. Such a shift in IS curve outwards leads to an increase in equilibrium national income and interest rate, from Y_e to Y_e' and from i_e to i_e', respectively as shown in TABLE 2–3. If we consider a shift from IS to IS', an outward shift, then equilibrium income and interest rate would increase.

If we consider the shift to be inward (or leftward) from IS' to IS, then equilibrium income and interest rate would both decline. Meanwhile, tables are reproduced for easy reference.

2.8.2 Shifts in the LM Curve and the Corresponding Changes in National Income

A shift in the LM curve downwards from LM to LM' as shown in TABLE 2–3.1 would lead to an increase in equilibrium national income but to a fall in equilibrium interest rate, from Y_e to Y_e' and from i_e to i_e' respectively. The downward shift in the LM curve can be caused by expansitory monetary policy whereby the monetary authorities cause money supply to increase, other things being equal. Such expansionary monetary policies include purchase of government securities especially treasury bills in the open market operations, the lowering of rediscount rate, liquidity and cash reserve ratios, and financing of government deficits through CBN credits to Federal Government, among others.
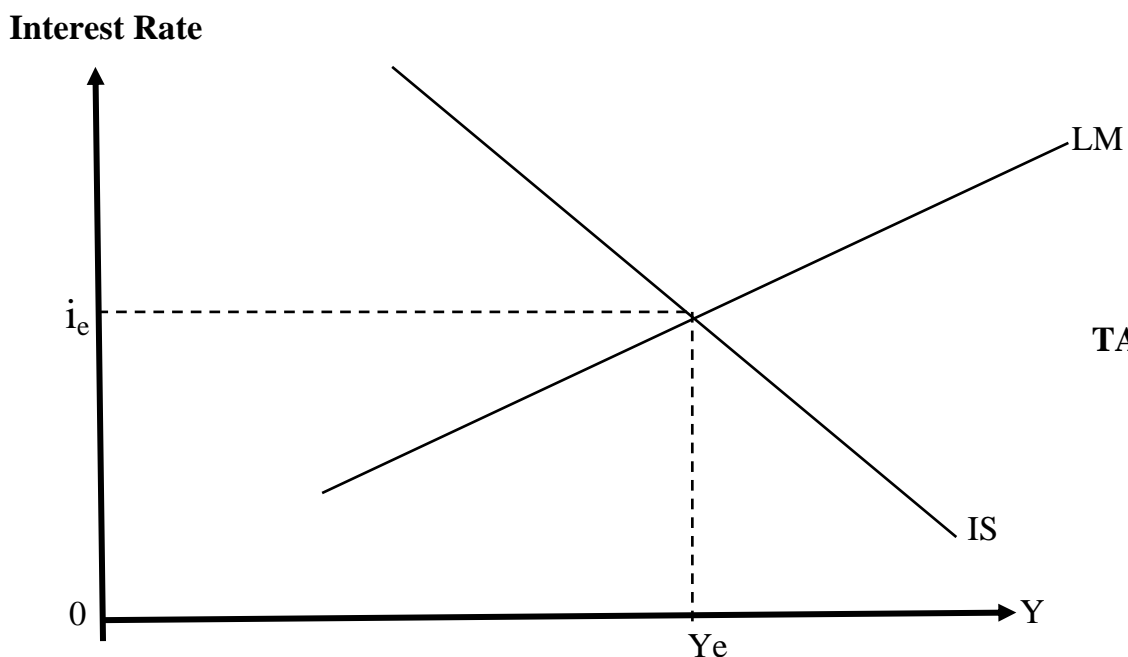
Interest Rate

TABLE 2–2

THE GENERAL EQUILIBRIUM OF THE PRODUCT AND MONEY MARKETS

105
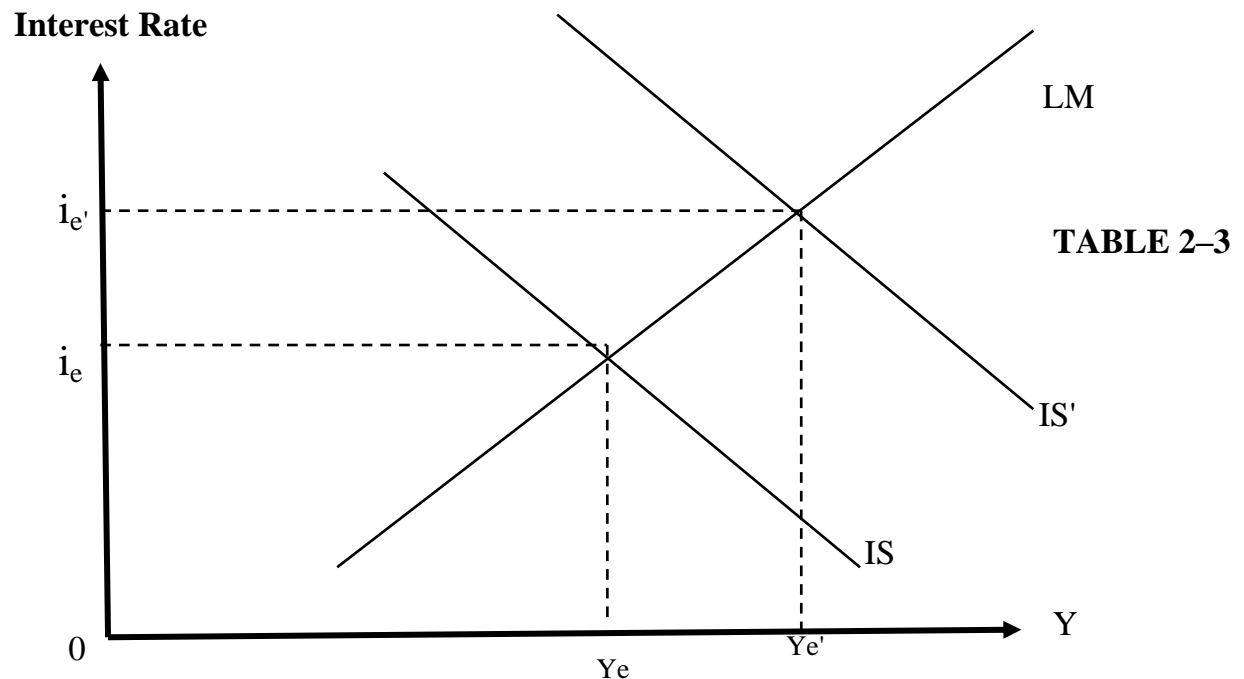
SHIFTS IN THE IS CURVE AND IMPLICATIONS FOR EQUILIBRIUM INCOME AND INTEREST RATE

If we consider the shift as an upward shift from LM' to LM, then a fall in the equilibrium national income and interest rate would result.
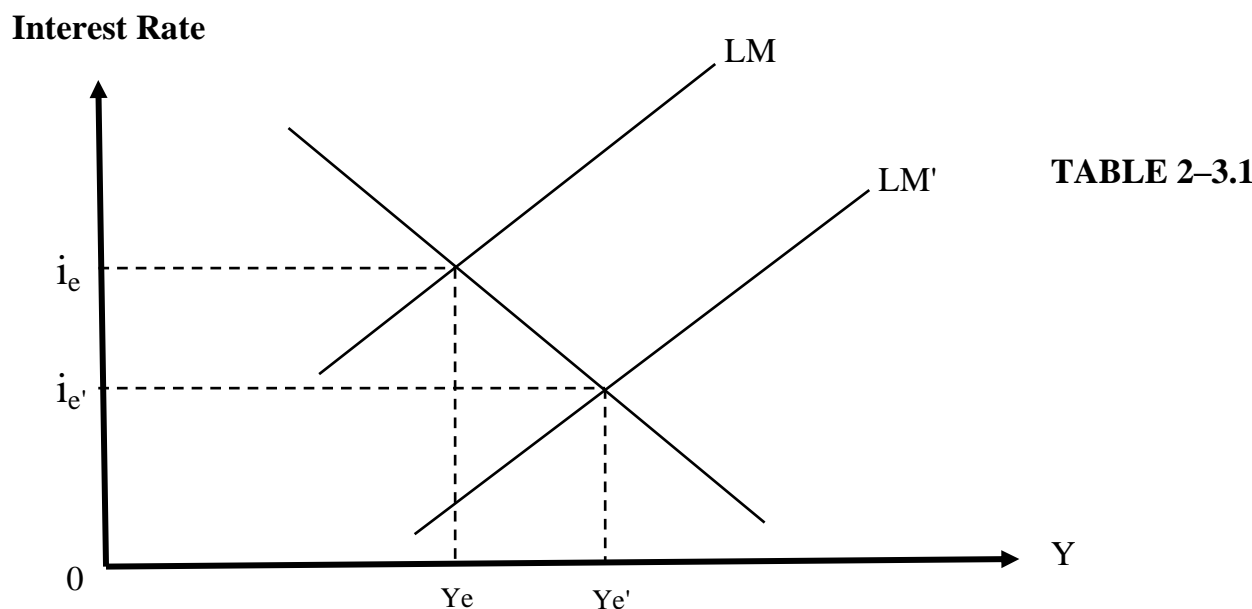
SHIFT IN THE LM CURVE AND IMPLICATION FOR GENERAL EQUILIBRIUM

2.8.3   Complementarity of Fiscal and Monetary Policies

Fiscal policy has to do with the magnitude and pattern of government expenditure and taxes (revenue) which are aimed at influencing the economy in a particular manner, usually the promotion of price stability and full employment of human and material resources (labour and capital stock). By its nature therefore, fiscal policy operates in the product market. Expansionary fiscal policy which is an increase in government expenditure or a decrease is tax revenue or both, leading to increase in aggregate expenditure, is represented as a shift of the IS curve outwards or rightwards. Whereas contractionary fiscal policy which is a reduction in government expenditure or an increase in tax revenue leading to a decrease in aggregate expenditure, is represented by a shift of the IS curve inwards or leftwards.

On the other side of the market, monetary policy has to do with changes in money supply directly or indirectly through monetary policy instruments. An expansionary monetary policy shifts the LM curve (in the money market) downwards by causing an increase in money supply at every interest rate while a contractionary monetary policy shifts the LM curve upwards causing a decrease in money supply at every interest rate

TABLE 2–4 illustrates how expansionary fiscal policy is reinforced by expansionary monetary policy and vice versa, leading to a much higher equilibrium national income: That is, the shift of IS to IS' would have only succeeded in raising national income from Y_1 to Y_2 causing interest rate to rise from i_1 to i_2. But when the expansionary fiscal policy is complemented by expansionary monetary policy whereby LM shifts downward to LM^1, the new general equilibrium occurs at Y_3 at the intersection of IS' and LM'.

Similarly, given the IS curve and the LM curve with equilibrium income Y_1 and interest rate i_1, an expansionary monetary policy alone will lead to an increase of national income from Y_1 to Y_2 with a decrease in interest rate from i_1 to i_0. But when complemented by expansionary fiscal policy which shifts IS to IS', the national income increases further to Y_3 with interest rate bouncing back and stabilizing at i_1. In other words, expansionary fiscal policy would not be fully realized as it would cause interest rate to rise and reduce the expanding investment expenditure; but with a complementary monetary policy which increases money supply to prevent interest rate from rising, the investment expenditure would not be discouraged by any rising interest rate and would therefore expand to the fullest. On the other hand, expansionary monetary policy alone would lead to a fall in interest rate which would discourage the release of money (from speculative demand) for transaction purposes; but with a complementary fiscal policy, the rising investment expenditure will prevent interest rate from falling and thus preserve the rising supply of money for transactions demand.

TABLE 2–5 illustrates the consequence of contradictory or conflicting fiscal and monetary policies. Thus, if a shift of LS curve outward to IS' (expansionary) is accompanied by a shift of LM curve upward to LM' (contractionary), the consequence is inflation (interest rate rising from i_1 to i_3) without any increase in national income. On the other hand, if a shift of LM curve downward from LM' to LM (expansionary) is accompanied by a shift of LS curve inward from IS' to IS (contractionary), the consequence is deflation (fall in interest rate from i_3 to i_1 or in price level) with no

change in the real national income Y_e (i.e. comparing the initial intersection of IS' and LM' with that of IS and IM).

In conclusion, fiscal and monetary policies are complementary so that one will not be fully realized or achieve full effectiveness without the other, correspondingly.

2.8.4   Effectiveness of Fiscal and Monetary Policies in Less Developed Countries

Fiscal and monetary policies tend to be less effective in less developed countries on account of several other constraints to output expansion, such as foreign exchange scarcity for imported inputs or deficient infrastructural services or skilled manpower constraint. Another major problem is the excessive budget deficit indulged in by governments of less developed countries which fuel their rapid inflation. The rapid inflation compounds the fiscal and monetary policy management by encouraging capital flight, discouraging investment and causing rapid depreciation of domestic currency which worsens the problem of foreign exchange constraint. All this results in inflationary stagnation (or "stagflation") as expansionary fiscal and monetary policies fail to promote output expansion but generate inflation instead.
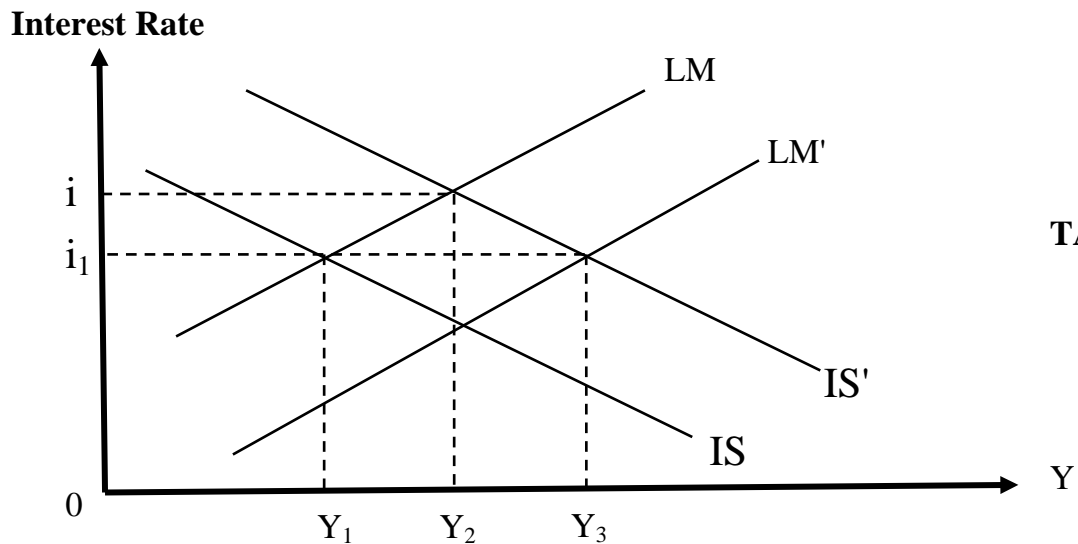
Interest Rate

LM

LM'

TABLE 2–4

i

i_1

IS'

IS

Y

0

Y_1 Y_2 Y_3

COMPLEMENTARY FISCAL AND MONETARY POLICIES

Interest Rate

LM'

TABLE 2–5

LM

I_3

I_2

i_1

IS'

IS

Y

0

Y_1 Y_2
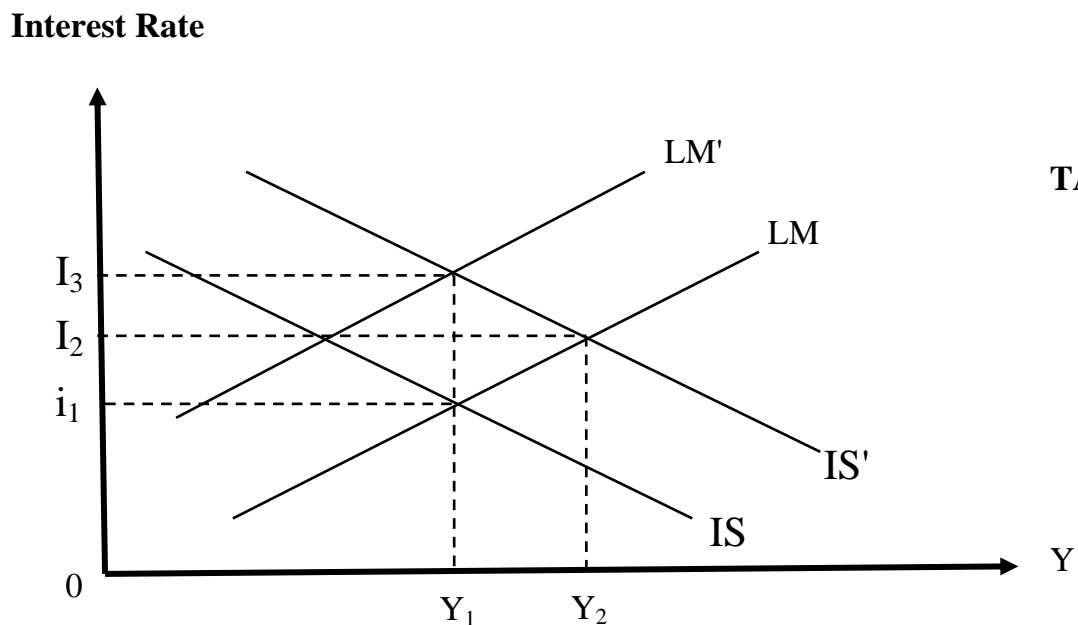
CONFLICTING FISCAL AND MONETARY POLICIES

Central banks implement monetary policy by controlling the money supply through several mechanisms. Typically, central banks take action by issuing money to buy bonds (or other assets), which boosts the supply of money and lowers interest rates, or, in the case of contractionary monetary policy, banks sell bonds and takes money out of circulation. Usually policy is not implemented by directly targeting the supply of money. Banks continuously shift the money supply to maintain a fixed interest rate target. Some banks allow the interest rate to fluctuate and focus on targeting

inflation rates instead. Central banks generally try to achieve high output without letting loose monetary policy create large amounts of inflation.

Conventional monetary policy can be ineffective in situations such as a liquidity trap. When interest rates and inflation are near zero, the central bank cannot loosen monetary policy through conventional means. Central banks can use unconventional monetary policy such as quantitative easing to help increase output. Instead of buying government bonds, central banks implement quantitative easing by buying other assets such as corporate bonds, stocks, and other securities. This resort lowers interest rates for broader class of assets beyond government bonds. In another example of unconventional monetary policy, the United States Federal Reserve recently made an attempt at things as policy with Operation Twist. Unable to lower current interest rates, the Federal Reserve lowered long-term interest rates by buying long-term bonds and selling short-term bonds to create a flat yield curve.

Fiscal policy is the use of government's revenue and expenditure as instruments to influence the economy. If the economy is producing less than potential output, government spending can be used to employ idle resources and boost output. Government spending does not have to make up for the entire output gap. There is a multiplier effect that boosts the impact of government spending. For example, when the government pays for a bridge, the project not only adds the value of the bridge to output, it also allows the bridge workers to increase their consumption and investment, which also help close the output gap.

The effects of fiscal policy can be limited by crowding out. When government takes on spending projects, it limits the amount of resources available for the private sector to use. Crowding out occurs when government spending simply replaces private sector output instead of adding additional output to the economy. Crowding out also occurs when government spending raises interest rates which limits investment. Defenders of fiscal stimulus argue that crowding out is not a concern when the economy is depressed, plenty of resources are left idle, and interest rates are low.

Fiscal policy can be implemented through automatic stabilizers. Automatic stabilizers do not suffer from the policy lags of discretionary fiscal policy. Automatic stabilizers use conventional fiscal mechanisms but take effect as soon as the economy takes a downturn: spending on unemployment benefits automatically increases when unemployment rises and, in a progressive income tax system, the effective tax rate automatically falls when incomes decline.

Economists usually favor monetary over fiscal policy because it has two major advantages. First, monetary policy is generally implemented by independent central banks instead of the political institutions that control fiscal policy. Independent central banks are less likely to make decisions based on political motives. Second, monetary policy suffers fewer lags than fiscal. Central banks can quickly make and implement decisions while discretionary fiscal policy may take time to pass and even longer to carry out. Third, fiscal policy headed by the government has proven to be financially unstable because the government has a much harder time

properly financing the economy. Due to the fact it is difficult to find the necessary resources to fund the economy.

2.9   IMPACT OF GLOBALISATION

It is significant to note that the recent global financial crises began as far back as 2001 following the September 11 terrorist attack in the United States. After the attack, the United States Federal Reserve in order to prevent the negative economic impact lowered interest rate, as a way of supporting the local economy.

The lowering of the interest rate allowed sub-prime customers to have access to mortgage facilities, but when the sub-prime customers actually proved to be 'sub-prime' by defaulting on their mortgages, the lending banks decided to package the loans into securitized bonds. These bonds traded freely in international markets and as a result of perceived illiquidity of the financial banks, recourse was taken to the international financial markets.

This exerted liquidity pressure on the international financial system to the extent that the bonds were then being discounted resulting to huge losses in the markets. Several wholesale financial institutions like Lehman Brothers, American International Group (AIG), Fannie Mac, Freddie Mae etc. were affected. And being that these institutions have large-scale international or global operations this 'virus' spread to the international financial system.

There is nothing that happens in the global financial system, as long as we remain a player in the global financial system that will not affect Nigeria.

In the first place, when banks from countries going through the global crisis are lenders to Nigerian banks – these foreign banks extended loan facilities to Nigerian banks – decided to recall those facilities beyond the plans of Nigerian banks. The local customers who are Nigerian business entities will immediately suffer the impact of the recall of these facilities which were meant to support their businesses.

Secondly, as a result of the financial meltdown, several people in the affected countries lost their jobs. Nigerians living in such countries would also be affected. Consequently, these will negatively affect inflows from Nigerians living abroad to their people in Nigeria.

Moreover, as a result of financial crisis affecting Europe and America, Foreign Direct Investment (FDIs) continues to experience a decline. Besides, the impact of any global financial crisis do affect the oil market resulting in unprecedented fall of the price, which during the 2008/2009 crisis, fell from above $100 per barrel mark to below $65 per barrel in January 2009. The impact of this drastic drop in price of crude oil on an economy that is more than 60 per cent dependent on sale of crude oil is better imagined. Our national budget income projections failed immediately and spread to the state and local government levels, ultimately reducing our income per capita.

The global financial crisis has warned on the need for investment portfolio diversification and attention to financial risk management without disguise. The primarily affected countries and financial institutions were expected to be in the forefront of financial risk management which is expected to guard against negative impacts of changes in the market

parameters and indices. However, recent developments have shown that this was not the case.

The lesson therefore is for banks to be careful of being involved in a 'bandwagon' investment practice, and over-dependence on foreign financing supports.

Furthermore, Nigerian banks are playing globally already. Nigerian banks have branches in Europe, America and other parts of Africa. Again, every Nigerian bank maintains a relationship with other foreign banks. And so Nigerian banks are playing globally but the extent to which they play on the global scene depends on the existing relationship between Nigeria and other nations and the financial capabilities of the given bank. Remember that we are a developing or emerging economy and so every aspect of our economic evolvement has its stages.

In a related statement, Akerele (2009:42) views the development thus: "the economic crisis was unprecedented in terms of scope and severity. The crisis started from the U.S. principally due to mismatch and over-exposure of banks to the mortgage industry and the capital market". The crisis, he claimed, spread to other parts of the world because of the internationalization of the dollar to which many countries' assets are tied. In the words of the immediate past governor of Central Bank of Nigeria, which was taken as one of his valedictory speeches on 30th March 2009 at the Eko Hotel and Suites, Victoria Island: *"global capital flows have frozen; credit crunch persists despite massive global liquidity injections; global aggregate demand fallen sharply (about $50 trillion value lost through capital markets and so on). Commodity price collapsed with*

global coordination failure. Major industrial countries and rich developing countries designing trillions of dollars stimulus package".

Credit thus became expensive than they were before the global financial crisis. The era of LIBOR+I etc. drastically played down. To that extent, for Nigerian banks that would depend on such loans for business would suffer set back in their businesses. The implication is that Nigerian banks which had easy access to international credit before the crisis will find it more difficult to get credit from international banks, until the crisis completely fades away.

The implication of the meltdown was profound. Banks overseas that, on the surface, look healthy have every reason to be fearful after seeing venerable institutions like Bear Stearns, Lehman Brothers (mentioned earlier) Meryl Lynch, HBOS and Fortis close shop in the maelstrom that hit the global financial system.

2.10 ANCIENT VIEWS ON INTEREST RATE

Most of the ancient thinkers and religious circles especially the medieval church opposed the payment of interest or usury because it was thought to be immoral to collect interest. The Great Greek Philosopher, Aristotle (384-322 BC) summed this position up succinctly when he wrote that "money is intended to be used solely for exchange, not to increase through interest for money is by nature barren".

But, by the 17th century, interest on borrowed capital was allowed as a result of trading which developed widely all around various European cities. Interest payment became necessary as compensation for surplus

units which part with liquidity so that deficit units can have access to funds. Interest is thus an inducement to savings.

2.10.1   Role of Italian Goldsmiths in Evolution of Banks

1.   **The Beginning:** It all started several centuries ago. As far back as the 13th century a group of Italian goldsmiths who migrated from an Italian province, Lomberdy, had settled in a part of London now called Lombard Street. By gradual process, these Italian settlers before the end of the 16th century had evolved a system of transactions which today forms the very foundation of modern banking.

2.   **Business in Gold:** At first the Italian goldsmiths only carried out the traditional services of their craft. As time went on, however, their business grew and they found it necessary to acquire vaults for the safe storage of all gold and precious stones they received from their clients. It was at this juncture that their services increased to include:

  (i)   working gold for the clients;

  (ii)   storing their gold and those received for work from the clients;

  (iii)   receiving gold deposits from clients for safe keeping against receipts;

  (iv)   lending part of their gold stock – first from their own, later including deposits from clients.

3.   **From Gold to Money:** There is no doubt that money was part of the items deposited with the goldsmiths for safe keeping. The fact of

issuing receipts against deposits of gold and money gave a lever to the development of modern banking, thus:

(i) goldsmiths released their clients' deposit on surrender of the receipt,

(ii) due to widespread use, goldsmiths' receipts became transferable,

(iii) goldsmiths' receipts became the first known issue of notes,

(iv) for convenience, receipts were later split into smaller units according to need,

(v) instead of lending in gold, goldsmiths issued their notes (receipts) to borrowers according to the value of gold they required,

(vi) goldsmiths transferred part or the whole of the clients' deposit against their letter of instruction – and this was the beginning of the cheque system.

4. **The birth of banking institutions:** The result of the above for reaching developments in banking activities let to small groups of goldsmiths, pooling their resources together and setting up business as merchant and private bankers. In 1694, the Bank of England was founded to control the private and merchant banks, as well as to administer the government's debts.

In 1894, a British owned bank opened office in Nigeria and operated under the name of Bank of British West Africa whereas Barclays Bank entered the banking scene in 1917. Indigenous banks made their debut in 1933 (National Bank of Nigeria), 1944 (African Continental Bank), 1945 (Agbomagbe Bank Limited), and so on.

2.10.2   Political Economy of Nigeria's Financial Sector

The hen did come home to roost on August 14 2009 as new Governor Sanusi Lamido Sanusi put a lie to all the false claims of some of our megabanks about their state of health. Since that fateful day when five of the Nigeria's banks managing directors and their executive directors were sacked by the Central Bank of Nigeria, concerned Nigerians have followed the development with keen interest. However, much of the analysis of the malaise has failed to appreciate the political underpinnings of the entire issue. Right from the First Republic, politicians have had dominant influence in the operations and misfortunes of our banks. Where are African Continental Bank (ACB), National Bank, Trade Bank, Savannah Bank, Ganji Bank and Societe Generale Bank today? All are defunct. Who are the people responsible for their distress? Although fiscal issues bordering on financial indiscipline, mismanagement and poor corporate governance in the matters arising cannot be ignored, but *stricto sensu,* the issues are far beyond that.

On July 6, 2009, Senator Nkechi Nwaogu, Chairperson, Senate Committee on Banking, Insurance and other Financial Institutions on the floor of the upper chamber named former directors of 13 failed banks who were involved in insider credit abuse that led to the banks' failure. The former directors of the failed banks collectively owed the defunct banks ₦53.3bn out of the ₦188bn loaned out to defaulters with a paltry sum of ₦4.722bn recovered by the Nigerian Deposit Insurance Corporation (NDIC). Ezeobi (2009:1-2) put it that ₦188bn belonging to depositors were lost.

However in October 2009, the CBN bailed-out eight of the troubled banks as they were virtually living on bubble capital by injecting ₦620bn lifeline into them to help them overcome their liquidity crisis. Unfortunately, two of the banks on life support of CBN donated ₦1bn each to the election campaign fund of late President Yar'Adua while one of the former South-South governors borrowed ₦40bn and $200 million from the same banks without paying back. We should not also forget that many of these banks contributed to the Presidential Library Project of a former president as well as his elections in 1999 and 2003 under the aegis of corporate Nigeria. If the board members of the five irredeemable debtor banks are to be exposed it will be found that many of them are politicians and are also involved in the insider dealings and credit abuse!

Political intrigues and considerations are perhaps responsible for the conspiracy of silence and aiding and abetting of these ailing financial institutions by the regulators. Hence, what is happening in our financial sector, argues Ezeobi (punch newspaper journalist), is partly total failure of institutions: the CBN, NDIC, Securities and Exchange Commission (SEC), Nigerian Stock Exchange, Federal Inland Revenue Service, relevant committees of National Assembly, the banks' external and internal auditors, anti-graft agencies and even a section of Nigeria's media should share part of the blame for condoning or refusing to blow whistle on the excesses and looting by corrupt politicians, influence peddlers and the rest of them in Nigeria's financial sector. Bank failures should therefore be a very serious matter.

2.10.3 SAVINGS MOBILISATION: The Primacy of Banks

If you look at the concept of what constitutes the nation's economy, the basic one is mobilization of savings. And, banking industry does it more than any other industry, asserts Lawal (2009:A11). Put differently, in the firmament of savings mobilization no star burns brighter than the banking industry. This is perhaps why two strands of thought have refused to vacate the central focus of this endeavour and therefore deserve attention in some detail. First, is the primacy of banking institutions in facilitating savings mobilisation. Second, is the imperative of designing reasonable empirical strategies to create, maintain and inspire confidence in the system. Banks must not fail!

Transparency to the individual investor means assurance. Investors normally steer clear of companies that lack transparency in their business operations, financial statements or strategies. Companies with inscrutable financials and complex business structures are riskier and less valuable investments. Less information means less certainly for investors. When financial statements are not transparent, investors are faced with ambiguous views of a company's real fundamentals and true risk.

In the 90s, the military junta rode the crest of its banking sanitation exercise in a foot-comb fashion and jailed all the partakers in the mindless plundering of the nation's banks. Most of the bank chiefs, directors, big-time loan defaulters and so on found guilty were hunted and hounded under their draconian Failed Bank Decree.

The failure of a bank is generally considered to be more important than the failure of other types of business firms because of the interconnectedness

and fragility of banking institutions. Research has shown that the market value of customers of the failed banks is adversely affected at the date of the failure announcements. It is often feared that the spillover effects of a failure of one bank can quickly spread throughout the economy and possibly result in the failure of other banks, whether or not those banks were solvent at the time as the marginal depositors try to take out cash deposits from these banks to avoid suffering losses. For sure, the spillover effect of bank panic or systemic risk has a multiplier effect on all banks and financial institutions leading to a greater effect of bank failure in the economy. As a result, banking institutions are typically subjected to rigorous regulation, and bank failures are of major public policy concern in countries across the world.

In the United States, deposits in savings and checking accounts are backed by the FDIC. Currently, each account owner is insured up to $250,000 in the event of a bank failure. When a bank fails, in addition to insuring the deposits, the FDIC acts as the receiver of the failed bank, taking control of the bank's assets and deciding how to settle its debts. The Nigerian Deposit Insurance Corporation (NDIC) is Nigeria's version of FDIC.

Aigbogun (2019:19) laments many Nigerians carry personal debts and can hardly come up with adequate sum in times of emergency without selling personal items or borrow money. The Chief Executive of CashBox who made this assertion attributed the situation to wanning savings culture in the country caused by a dysfunctional financial system, impulse purchases, influence advertisements, cultural beliefs and poor infrastructural facilities. There is therefore generally erosion of confidence in the nation's banking system.

Aigbogun, who stated this during the launch of CashBox, an online saving platform designed to incentivize the saving of small sums, said that the combination of those anomalies has induced unhealthy savings habit, which only technology can help reverse. The launch of CashBox in Nigeria, according to him, has brought respite giving many Nigerians the hope of earning high interest on their savings.

CashBox offers interest rates between 7 and 15% per annum on saving plans on their platform, which is higher than what customers receive from traditional bank accounts. CashBox is responding to one of the most critical financial challenges facing Nigerians today - how to help Nigerians save. Savers can access this platform effortlessly and free of charge through a one-time online sign up. Withdrawals on the platform are restricted to the first day of every month to further encourage a disciplined saving habit. Savers can earn interests and rewards for simply saving money and using the referral option. CashBox is able to pay higher interest rates because most of its operations are technologically driven and does not accrue the high cost of maintenance which is associated with running a bank such as maintaining branches, staff, among others.

To underscore the importance of savings in an economy, the Minister of Finance Mrs Zainab Ahmed March 5, 2019 said while addressing members of The Capital Market Master Plan Implementation Coucil (CAMMIC) in Abuja that Federal Government would set up committee to advice it on how best to not only mobilize savings to boost capital market liquidity but charges Nigerians on savings for the growth of the national economy. Wole (2019:21), the Guardian Newspaper correspondent who

anchored this report also quoted the minister as bemoaning the lackadaisical attitude of Nigerians to savings.

2.10.4   High Bank Mortality Conundrum

THISDAY Newspaper (2019:15) continues with alarm that over the past few decades, there has been a deluge of bank failures in Nigeria mostly occasioned by a cocktail of factors, chief among which are non-performing loans (NPLs) which as at 1st March 2019 stood at N2.245 trillion. These, according to the paper essentially are toxic items that arise from insider abuses often perpetrated by the top echelon in the banking sector, in collaboration with others outside the system. While many banks have gone under and several others bailed out with hundreds of billions of public funds, the sharp increase in bad debts over the years calls for stringent measures and tougher capital rules.

It is trite that the story of bank failures in Nigeria has been largely that of bad and doubtful loans, exacerbated by a not-too-tidy supervisory oversight by the regulatory bodies. It also noteworthy that many men and women of influence, worth and power, both in the public and private sectors, are behind NPLs and the attendant failures. All they got was at best a slap in the wrist whilst hundreds of billions of public funds have been channeled into bailing out the banks they ruined. A complacent regime that has emboldened staff members to also commit all sorts of infractions. Galaxy TV News on 2nd March 2019 reported how a Lagos bank worker was arrested for diverting N3.4 million from a customer's account.

The Chartered Institute of Forensic Investigative Auditors of Nigeria (CIFIAM) lamented over recorded volumes of fraud in Nigerian Banks

which as at 31st Dec. 2018 stood at N25bn (twenty-five billion naira) and increased in the last 5 years due to the lack of appropriate fraud prevention mechanism. Consequently, there was upsurge in scandalous bank collapses, financial losses, lay-offs, among others. Their president Eriape (2019:13) disclosed this at an intensive training of their members 2nd March 2019 with the theme: "The use of Forensic and Investigative Auditing for Prevention of Fraud, Corruption and other Cyber Crimes in Nigeria."

In a related development, Lagarde (2019:27) of the International Monetary Fund (IMF) warns global banking community of possible loss of $350bn (three hundred and fifty billion dollars) to cyber attacks. The alarm was raised in London 4th March 2019 while making the call for better regulation of the banking system as a requirement for building a safe, more sustainable and ethically sound financial sector in a paper titled "The Financial Sector, Redefining a Broader Sense of Purpose" delivered at the 32nd World Traders Tacitus Lecture.

2.10.5 Erosion of Confidence and Wanning Savings Culture

No fewer than 23.8 million Nigerian adults currently keep their money at home because they don't want to save with the banks. A survey by Enhancing Financial Innovation and Access, a Nigerian based financial sector development organization, revealed that 52.8 million out of the country's adult population saved money regularly. But the survey, according to financial Vanguard 4th March 2018, showed that only 20.5 million of the 52.8 million were doing so in banks.

This, according to experts, confirms a widely accepted industry statistics that there are about 22 million bank accounts in the country. The report also found that majority of the 23.8 million people, who kept money at home, were doing so with friends, families or through informal society or village associations. This development may not be unconnected with loss of confidence in Nigerian banks.

The level of investors' confidence in banks as a safe depository can make or mar savings mobilization. The biggest casualty in any banking crisis is the confidence that the ordinary man holds in the bank of his or her choice. A bank with a shelf load of local and international awards necessarily inspires confidence with the unwary customer made to believe that the awards carry much weight, and that they are clear evidence of the strength and dependability of the affected institution. But to then wake up overnight to be told that the same institution is shaky, and that its superstar managers are unreliable, can result in such psychological turmoil among customers and investors, the extent of which can be measured in diverse dimensions. The integrity of the awarding institution is, needless to state, also calls into question. In a country where awards, like chieftaincy titles, have both social and cultural significance, this point may well be apposite.

The Nigeria Electronic Fraud Forum (NeFF) has raised an alarm over increased fraud attacks on bank customers using mobile devices for transactions. NeFF in its report for 2018 showed that over 17,600 bank customers lost N1.9 billion to fraudsters across electronic channels during the year. The scary report also disclosed in the past 13 years, Banks lost a frightening sum of N199 billion to E-fraud.

It is now imperative that all relevant authorities work towards restoring industry confidence and ensure that all areas of potential risk are robustly and lucidly addressed.

2.11 PERSPECTIVES ON MACROECONOMIC MANAGEMENT

The main concern of any government in a modern economy may thus be summarised to include the following:- economic growth and development; low level of inflation and price stability; reduction in unemployment; maintenance of healthy balance of payments and stable value for the domestic currency; general political and social well-being of the people. Moreover investment, says Ogun (1986:4), through the multiplier effect has the ability to increase gross national product (GNP). The Nigerian economy does not obey the law of economics. The paradox is that if this happens always and if a pattern can be discovered, such pattern becomes a model which can be used for prediction and analysis.

The goal of economic policy, once again, is to achieve the equality of planned investment with planned savings. And, the traditional macro-economic equation:

$$\mathbf{Y = C + 1 + G} \text{ becomes immediately relevant.}$$

What this equation says is that national income is the sum of the expenditures made by all of us for consumption, the investment expenditures made by all of us and in particular business firm and government expenditures.

In an open economy, we also have to provide for exports and imports, but we may keep our model uncomplicated by ignoring these external transactions for now.

What is interesting is the decomposition of each of the terms of the equation to appreciate their make-up and how they behave.

Let us take consumption for instance. This is dependent on our income level and the stable proportion of our income that we regularly consume for food, shelter, transport, and clothing and what proportion we can afford to save, or draw from savings. Again, let us consider savings; how much we save depends on our level of income, interest rates and our expectations. Generally, the lower our income the less we may save, since most of our income would go for consumption.

However, Professor Jack Revell submits that "the levels of savings, investment and income which are realisable depend on the development of the financial system". Put in another way, according to Professor Ben – Shahar, "the greatest economic efficiency can be achieved where all markets in the economy, including the capital market are at perfect competitive equilibrium".

With respect to savings and investment, Ben – Shahar goes on, "such an equilibrium should fulfil the conditions that the marginal productivity of capital is equal to the subjective rate of substitution of consumption over time. This condition is derived from the equality between the marginal rate of return on capital and the marginal rate of interest paid to savers".

In economic literature, the economy is epitomised variously as an engine in which case you find economists talking of acceleration, reving-up or applying brakes to the economy. When the economy is epitomised as a balloon on the other hand, you hear talk of deflation and reflation. Expectedly various problems have given rise to a number of concepts in economic thought. For instance, the Nigerian economy has been beset with alarming rate of inflation as well as unemployment, a situation called stagflation in economic parlance. The inflationary pressures in existence in the country can be adduced to a number of factors, principal of which are the devaluation of the Naira, increased demand for goods and services without commensurate increases in supply and perhaps an increase in the level of money in circulation.

Economic thought sees the economy as tending to vacillate from one school of thought to the other depending on the beliefs of the principal policy makers. For this reason in economic theory, there are basically two means of combating inflationary pressures, for instance.

The Keynesian School which is often known as the activist school of economic thought believes that there is a role for government in the economy and that the economy can be fine-tuned with monetary and fiscal policies. The Keynesians, so to speak, who believe that inflation results when aggregate demand surpasses the potential output of the economy given the natural endowments of that economy will advocate a reduction in aggregate expenditure. The role of government in this case is to interfere through its revenue and expenditure policies to ensure employment or reduce inflation as the case may be.

There is the other school, the Monetarist School of Professor Milton Friedman, better known as the Chicago School, which believes that the only policy that work is that of constant growth in money supply over a very long time. The monetarists are advocates of the quantity theory of money, and as we can see, relate fluctuations in the price level to money supply. Quantity theory of money in its simplest form suggests that demand for and supply of money will be in equilibrium when the quantity of money is equal to the quantity of goods and services multiplied by their prices and divided by the income velocity of money.

In the application of any of these policies, government often show that they are apostles of the theory of rational expectations which essentially states that, people act according to their beliefs and expectations and that if people expect that inflation will persist they will take actions which further fuel inflation. To this extent therefore, the only policies which are likely to be effective are policies which are totally unexpected. This often leads governments to use shock therapy such as dawn broadcast announcements of economic policy changes as in the case of fuel subsidy removal on January 1st 2012.

Some of the techniques that governments often use to regulate or deregulate the economy include: credit restraints, stabilization measures, liquidity constraints, reserve ratios, tax cuts or tax increases and various other incentives. Dividend interest rates and exchange rate policies are also used to stimulate production, savings, consumption and investment as the case may be.

Let it quickly be pointed out, as the Central Bank of Nigeria CBN (2011:2) has observed, "Nigeria's external trade developments continued to display considerable external dependence thus subjecting the economy to external shocks and inadequate flexibility in her domestic policy actions".

Dependence of the Nigerian economy on the external sector started as early as the 1950s and 1960s. The rising degree of globalisation has merely heightened this phenomenon.

External dependence implies that the dependent country may not be able to attain its optimum level of development since it is tied to the apron strings of the dominant country or group of countries which pursue their own national interests quite often than not to the detriment of the dependent country. A dependent economy can only optimize its growth and development objectives through concerted policy measures targeted at minimizing the degree of dependence.

Economic growth is defined in terms of an increase in a country's output of goods and services as measured by Gross Domestic Product (GDP). An essential ingredient of growth is capital accumulation, that is, net investment or the excess of gross investment over depreciation. There are some other complementary factors directly or indirectly linked with capital formation for growth to take place. Such factors include human resource development, favourable economic environment, improved technology, adequacy of infrastructure, security and political stability.

Economic development for a nation is seen as involving an annual increase in its GDP or per capita at an acceptable or reasonable rate. Quite often, these economic measures were well supplemented by non-economic social

indicators such as gains in literacy, schooling, health and housing facilities.

In a communique released by Institute of Financial Consultants (IFC) in Lagos after "Fellows Forum" Friday 23rd December 2011, it observes with dismay that: "The Nigerian economy has entered a dangerous phase, calling for exceptional vigilance, coordination and readiness to take bold action through macroeconomic policies". The goal, it warns, "should be to maintain accommodative monetary stability, bearing in mind the havoc international spillovers can wreak".

Expectedly however, SAP and its connotations of liberalisation and deregulation has continued to be a subject of intense debate. Critics of the programme are quick to point to the "sapping" effects in the areas of widespread unemployment, domestic inflation, the continued deterioration of the naira exchange rate, to mention but a few. On the other hand, the supporters of this programme extol its virtues citing spurious cases.

2.12   DEREGULATION OF INTEREST RATE

Iyade (1992:13) appears forthright in his analysis of deregulation, hear him: "Interest rates deregulation, a fallout of SAP, has undoubtedly, benefited the capitalist class but its value for the economy as a whole is still subject to controversy. And as expected, the deregulation has resulted in increased competition in the financial sector and consequently, higher yields for depositors." Specifically, he enthused, "among some notable changes deregulation has visited on the economy, are substantial increase in real interest rates and less dependence on long-term capital".

The Financial Guardian reporter is of the view that "these changes which were not envisaged have had far reaching consequences on the economy and this has tended to underscore the gains deregulation conferred on banks and savers". Most financial analysts, businessmen and bureaucrats, he goes on, agree that high long-term interest rates constitute an obstacle to the economic recovery bid.

"Perhaps, the fear of uncertainties, epitomised by government policies may be used to explain the resilience of high interest rates, but that fear alone definitely undermines the noble role played by the deregulation of money", insists Iyade.

Although deregulation alone may not have occasioned, the initial increase in real interest rates, it has however let loose powerful forces functioning collectively to prevent them from falling.

Thus, deregulation of money has sustained rates of high level for three reasons according to Iyade.

First, it has increased the real cost of money to banks. Banks now reap colossal profits by lending at higher rates than they pay depositors.

Furthermore, deregulation has been instrumental to the unwillingness of rates to slide by compelling banks to bid against each other for the deposits of ever-increasing patrons.

Depositors represent sellers in the money market and they are usually dazzled by offer of high interest rates.

Consequent upon this, and coupled with the overwhelming forces of free market competition, as well as their unpreparedness to loose even a single

depositor, banks bid up prices they pay for money and this in turn tend to heat up the savings – investment environment.

The air of uncertainty is another cardinal reason for continued high interest rates as it unites both savers and banks in their demand for an extra 'risk premium' as a safeguard against future rates swing.

Had it been empirically proved that the fear of inflation is the cause of high rates, than allowing rates to float is the least option one should do. The fear that rates may go up tomorrow is enough for savers and banks to shore up rates today. Savers then live with fear that they will be drowned in the abyss of a low yielding account as rates move up, says Iyade.

On their part, banks are scared of the prospect of their cost of funds rising above the yields on their current liabilities. The disappearance of long-term funds, a direct outcome of the uncertainties occasioned by interest rates deregulation has dampened savers and banks enthusiasm to tie up their money.

Additionally, it has introduced to savers a somewhat "high market rates" and "short maturities" syndrome. Savers now want their rates adjusted hourly, daily, weekly or quarterly. With such floating rates, a bank's cost of funds is a foregone conclusion. Hence, it is too risky for a bank to tie up more than a small proportion of its deposits in long-term fixed loans, asserts Iyade.

2.12.1   Inter-related Issues

Chandavarka (1971:333-50) says, "One of the basic problems facing less developed economies is the scarcity of domestic capital in relation to the

size of investment required to achieve high and self-sustaining rates of growth of national and per capita real income". Although the accumulation of capital is not the prime determinant of economic growth, its role as a necessary, even if not a sufficient, condition in the economic development of the less developed countries is widely recognized, says Chandavarka. But, paradoxically, positive rate policies have been conspicuously lacking in the developing economies, apart from a few notable exceptions such as Taiwan, Korea and Indonesia. Even in the literature the emphasis has been more on the structure, behaviour, and determinants of interest rates than on the policies pursued.

Discussions of interest rate policy in the less developed countries, says Chandavarka, have been concerned largely with the role of interest rates as 'loan' rates, that is to say, as a means of regulating the cost of availability of credit. But interest rate policy has other relevant aspects than the purely monetary. For instance, interest rate can be viewed as instrument for more effective mobilization of savings (as deposit rates) through the offer of realistic rates on monetary savings, such as time and savings deposits, claims on financial assets, and government securities, Chandavarkar.

Similarly, he says, interest rates can be viewed as a social rate of discount to determine the optimum allocation of savings between consumption and investment as a rationing device for efficient allocation among alternative forms of investment. Therefore, a purposive interest rate policy has different aspects, each of which is relevant for particular phases of monetary policy or development planning. Consequently, interest rate policies have to reconcile the conflicting requirements of rates that are appropriate to the desired level and composition of investment and also

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attractive enough to stimulate savings. This calls for policies aimed at an optimum level of interest rates as well as a proper spread between different rates in keeping with the changing requirement of economic growth and stability, concludes Chandavarkar.

The role of interest rates in helping to mobilize voluntary domestic savings merits much closer attention, not only because of its bearing on the economic growth of the less developed countries but also because of the general scepticism regarding the efficacy of interest rates in mobilizing savings; this scepticism in turn derives from the lack of a determinate casual link between rates of interest and aggregate real savings in the national accounts sense, or even between interest rates and financial savings. Moreover, even for personal savings, the econometric evidence while by no means conclusive, does suggest that such variables as the level, distribution, and rate of growth of disposable income, wealth, price levels, industrialization and urbanization are far more influenced than rates of interest in explaining observed variation in the savings-income ratio.

In fact, efforts to introduce fiscal and monetary variables, such as taxes and interest rates into savings functions, says Chandavarkar, have not been notably successful. Thus, the inductive evidence appears to justify much of the received doctrine on the relative unimportance of interest as an incentive for saving, he notes. All this reflects the complexity of the determinants motives, and incentives underlying the savings behaviour of individuals and households, which is, moreover, subject to life cycles. For instance, saving may be for a specific purpose (the Harrodian 'lump saving'), for old age, for inheritance, or for unknown future contingencies. But while the concept of saving as a residual is true of aggregate saving in

the typical Keynesian model of an economy at less than full employment, it does not necessarily hold good for particular persons or groups in specific forms, such as interest-bearing assets. It would be unrealistic to deny the existence of an *ex ante* savings gap that acts as a constraint on the rate of growth.

One fact germane to understanding the term "interest rate", is that interest rate is a 'price'. It is a price paid (to the saver) for postponing payment or consumption of a financial asset to a future time or the opportunity cost of deferring present payment or consumption. And like every other price, it is determined by the forces of demand and supply. Also like other market prices, it determines who gets what, that is resource allocation. In other words, interest rates perform a rationing function by allocating limited supply of credit among many competing demands for it.

According to Majekodunmi (2019:43), "interest rates are rental payments for the use of credit by borrowers and return for parting with liquidity by lenders". While there are different types of interest rates in the economy, the basic rates are the lending rates and the savings rates. While the former refers to what a borrower pays to a lender for using the lenders' money, the latter is what the saver gets as benefit or reward for keeping his money and allowing it to be used by another person.

While interest rates would induce or encourage savers to save more or lenders to lend, it can however discourage the borrower from borrowing hence inability to engage in that economic activity (investment) for which borrowing was intended for. Against this background, interest rate; be it savings or lending, determines to a large extent, the investment,

consumption and savings decisions of economic agents as well as the overall performance of the economy. As interest rate is a price determined by the forces of demand and supply; for loanable funds (funds – that can be lent to borrowers), the supply side is basically determined by savings. That is, that portion of present income which individuals are willing to set aside for future consumption. Without any doubt the higher the supply (savings) the lower the price, interest rate in this case. The demand side is determined by borrowers represented by investors, who need the savings to implement one investment project or the other and by so doing increase employment and output as well as income in the country.

Conversely, the higher the demand (for savings from the investing public), the higher the price (interest rate) hence it is those borrowers that can pay the prevailing interest rate, that gets the available loanable funds. But beyond this, are other factors which play significant role in determining the lending rates. This includes the cost of financial intermediation or the cost expended by banks represented by interest rates paid to savers as well as administrative expenses. Of course, where this is high lending rates would be high.

Meanwhile, the cost of financial intermediation is determined largely by the prevailing socioeconomic infrastructural facilities, political environment and government policies. Another factor affecting lending rates is fiscal policies represented by government spending and revenue. When government runs fiscal deficit which means spending more than it earns, it has to borrow either from the CBN through ways and means (printing of money) which invariably leads to inflation or from the public through treasury bills.

The effect of government borrowing from the public is that it reduces the amount of loanable funds in the system hence scarcity of funds which induces an increase in interest rates. Remember government borrowing is an additional demand, which in the face of limited supply, will eventually make the price to increase.

Another salient factor affecting interest rates, be it lending or savings, is inflation. That is the rate at which prices of goods and services increase in the economy. The linkage here is that for interest rates to be effective in encouraging savings and lending it must be above the prevailing inflation rate.

For instance, if inflation is say 10 percent per annum, meaning a good of ₦100 today will become ₦110 by next year, and interest rate is 7 percent, meaning my ₦100 savings today will by next year be ₦107, then I might not want to save or lend because at the end of the year, courtesy of inflation, the purchasing power of my ₦100 savings, that is the amount of goods it can buy, would have been reduced by ₦3.

Against this background, inflation is a disincentive to savings and even lending. Suffice to say that inflation will affect the eventual profitability of the investment project implemented with the money borrowed thus increasing the risk of default.

In fact, another subtle factor affecting interest rates is default risk; the risk of the borrower, not repaying back the loan either due to failed business (which can be caused by unfavourable socio-political and economic environment or the character of the personality involved).

According to economic theory, inflation reflects disequilibrium. Rising prices imply that aggregate demand exceeds aggregate supply. Investment is one of the ways through which aggregate supply can be increased, importation being another. If investment is discouraged through increased lending rates, how then do we meet the demand for goods and services? Do we continue to import goods that are not available due to lack of investment and further exacerbate our situation?

However, our concern is that interest rate is one of the factors that encourage savings just as condiments are used to give flavour and relish to food. An investor that deposits his money with a bank or any other deposit-taking institution expects to be reasonably compensated for parting with his liquidity.

Except in the case of a current account where a higher proportion of the liquidity is still retained by the customer through the use of cheques, every other type of account commands interest rate that should not be less than the opportunity cost of foregoing his liquidity.

Interest rate is considered to be one of the determinants of investment because it is the cost of capital, says Fashola (2011). Under a rational investment behaviour, he explains, firms are expected to invest up to the point where the marginal rate of return on investment is equal to the market interest rate or opportunity cost of capital. Alternatively, one may consider that the marginal efficiency of investment (or marginal productivity of capital) declines as the level of investment is continually increased, he avers. It will therefore not be profitable to invest beyond the level at which the marginal rate of return on investment (or marginal

productivity of capital) falls below the market interest rate. Thus, if the market interest rate falls, it will be profitable to expand investment while if the interest rate rises, some marginal investment projects will no longer be viable or profitable and it will be necessary to reduce the level of investment. That is why project appraisal is conducted by discounting expected future earnings by the market interest rate to obtain the net present value of an investment and which represents the market worth of the investment, according to the university don.

Since the interest rate is used in discounting the expected future earnings of the investment, a rise in interest rate will lower the market worth of the investment while a fall in interest rate will increase market worth of the investment, and hence influence the investment's attractiveness. So, interest rate is considered one of the factors determining the level of investment expenditure. It is the view of Keynes, according to Fashola, that interest rate is generally stabilised through speculative activities of stock-brokers and so cannot be significant in explaining changes in the level of investment expenditure. As the economics professor put it: "one can only expect a changing variable to influence another variable, not a 'variable' that remains constant or rigid".

2.13   THEORETICAL ISSUES IN INTEREST RATE DEREGULATION

Aggregate savings constitute an important macroeconomic variable in an economy be it developing economy or developed ones and several variables are known to affect aggregate savings in any economy. These variables are Gross National Product, real rate of return on savings,

inflation rate, tax policy and life expectancy. Out of these variables affecting aggregate savings in an economy, real rate of return on savings is of utmost importance.

The theoretical basis for the use of interest rate policy in stimulating investment is informed by the McKinnon-Shaw hypothesis which postulates that interest rates have a positive responsiveness to savings and economic growth with investment serving as the link, McKinnon and Shaw (1973:62-80). They view administered low interest rate as detrimental to increased savings and hence investment demand.

They argued that high interest rate induces savings which can be utilized in investment. As a result, interest rates and investment are linked by two transmission channels. Interest rates encourage financial saving which can be invested (self-finance) or lent out to borrowers as loan (external finance).

McKinnon and Shaw in their spectacular exposition while opposing interest rate regulation posit that during period of high inflation, nominal interest rates ceiling are associated largely with negative real rates of interest which always produce large withdrawals of funds from the banking system and therefore result in disintermediation. Furthermore, according to McKinnon and Shaw, the effects of financial repression and low real interest rates are two:

Firstly, productive investment would be low because households both decrease savings and increase luxury durable goods consumption. Secondly; the existing funds for productive investment are allocated inefficiently because the mark price rationing system is not at work.

2.13.1   Interest Rate and Aggregate Consumption

Another interesting issue concerns the role of interest in the consumption function. Does this theoretically relevant variable have a practical significance, and if so, what is the direction of the effect? Scepticism about the influence of interest rates on consumption and savings began with Keynes (1936:43-94), who asserted that the effect was small. In particular, Keynes argued that the main channel by which a fall in interest rates increased aggregate consumption out of a given level of income was to increase the dissaving of the elderly, as such a change would make an annuity more attractive relative to straight interest income. The second controversy can be traced at least back to Alfred Marshall, who attributed to Sargant the possibility of target savings, in which case a rise in the interest rate could conceivably reduce the rate of saving. Marshall regarded this outcome as an anomaly. A later generation, raised on income and substitution effects, would argue that the standard substitution of a rise in the interest rate would be to increase future consumption (and hence saving) at the expense of current consumption, although there might exist circumstances in which the substitution effect could be overwhelmed by a stronger income effect. Curiously, there appears to be some empirical evidence on the side regarded as unusual or perverse by the economic theorists. Weber (1970:591-600) and (1975:43-85) in two separate papers based on a life cycle model of consumption, presents results from U.S. data indicating that a rise in the rate of interest will induce an increased level of consumption.

The same conclusion, namely a negative direct effect of the treasury bill rate on personal saving, according to Weber, results as a by-product of

Tanner's study of the real-balance effect in Canada. But Somermeyer and Bannink (1967:33) report the more conventional positive effect of a rise in the interest rate in the context of an aggregate savings function for the Dutch economy, although the effect is not statistically significant. The fact that it is difficult to resolve the second issue suggests that Keynes was probably right about the first one.

Weintraub (1977:81-82) quotes Colin Wright as presenting evidence of a negative influence of the interest rate on aggregate U.S. consumption. This evidence is largely irrelevant to the second issue, however, as it comes from a model in which the interest rate as an explanatory variable is a measure of only the substitution effect. No one, claims Weintraub, ever doubted the direction of the substitution effect alone, although Wright takes some pains to demonstrate that this substitution effect is nontrivial in magnitude.

2.14   FINANCIAL REPRESSION

A preamble is necessary to set the various interactive elements for contextual understanding of financial repression. Firstly, in many theories of economic growth, money does not play a significant role as it is not regarded as a real 'resource'. The sole purpose of money is seen as supporting exchange and determining the price level, i.e. money is regarded as a 'veil'. Of course, the progressive introduction of money into less developing countries has the advantage of replacing barter and encouraging exchanges which are mutually beneficial to all parties. As a result, the scope of exchange enlarges, division of labour increases and there is greater efficiency in the allocation of resources. Factors of

production are now freed from producing for self-sufficiency alone as would have occurred in a bartering economy, so that the production possibilities of the economy increase.

Money markets in many less developing countries are, however, according to Ghatak (1999:707-30), far from perfect. This may present problems since a well-developed money market has a positive impact on economic growth by allocating savings into investment efficiently through financial institutions and the process of intermediation. The demand for loanable funds is brought into equilibrium with the supply of loanable funds in money markets via changes in the interest rate. A developed money market therefore leads to a more efficient allocation of resources, as well as providing for more liquidity and safety via trade in financial assets. In many less developed countries, savings and investments are rather low as people have less access to the wide variety of financial assets available in more developed economies. Savings too often take the form of holdings of land and gold rather than the financial assets which could help channel savings into productive investment.

Secondly, the money markets of many less developed countries are sometimes characterised by what is labelled as 'financial dualism'. This means that the money markets in less developed countries can be divided into two broad categories: (a) organised; (b) unorganised. The *organised sector* generally consists of a central bank, commercial banks, co-operative credit banks and development banks. Division of labour and specialisation does not always exist in such money markets as with the absence of insurance companies. The *unorganised sector* mainly consists of

moneylenders, indigenous banks, pawnbrokers, traders, merchants, landlords and friends.

While the organised sector is amenable to financial control, the unorganised sector is not. In many less developed countries the unorganised sector still controls a significant section of the money market, chiefly because of its hold over the rural areas. Clearly the existence of such *financial dualism* has restricted the use of bank cheques and other means of payment. By reducing the volume of monetary transactions, it has also helped to perpetuate arguably wasteful non-monetary transactions of a barter or goods exchange variety. Further, it has deprived the society of an array of financial assets through which savings could have been more effectively mobilized and converted into investment for promoting economic growth. Evidently, a major policy objective in less developed countries should be for the organized sector of the money markets to bring the unorganised sector more closely under its control.

In the 1970s, Ghatak quotes McKinnon and Shaw as having argued that many less developed countries were following a monetary policy which leads to financial repression. A system of financial repression occurs when the real rate of interest (i.e. nominal rate of interest minus the rate of inflation) is negative and below the equilibrium rate of interest. The policy of keeping the real rate of interest close to zero or even negative is based on the Keynesian idea that investment is very elastic with respect to changes in interest rates. Since investment is regarded as the prime mover of the economy, financial repression is advocated, rightly or wrongly, to stimulate investment and growth.

Critics have pointed out, however, that in most less developed countries investment is savings constrained. It is the lack of availability of savings rather than the cost of borrowing them that effectively determines the level of investment. Hence, less developed countries should avoid financial repression and try to make the real rate of interest positive (rather than negative) in order to reward and encourage savers.

Ghatak agrees that a rise in real rates of interest would, it is argued, raise savings, raise investment and therefore raise economic growth. Further, a positive real rate of interest would arguably induce firms to choose only those investment projects which have a high output-capital ratio. Since only those projects with higher productivity are now chosen, the resulting gains in efficiency will lead to higher growth rates.

There is certainly some evidence to suggest that a system of financial repression has had an adverse effect on economic growth in many less developed countries, particularly South American countries, Lucas (2008:3-42). It should, however, be pointed out that a rise in real rates of interest can actually have a contractary effect on growth. For example, such a rise could lead to cost-push inflation, as the interest rate is part of the cost to many products. Further, given the financial dualism in less developed countries, a rise in real rates of interest in the organised money market would very probably lead to a similar rise in the unorganised money markets. Small businesses in less developed countries which frequently depend on the unorganised sector would then be driven out of business, reducing employment. Funds might also flow from the unorganised to the organised sector, leaving borrowers from the unorganised sector highly vulnerable to pressure for early debt repayment.

Clearly, the final impact of the end of financial repression could vary from country to country. The weight of opinion seems to suggest that if the benefits claimed for the end of financial repression are to be realised, then it should be accompanied by prudent macroeconomic policies; for example, price stability, a low public deficit to gross domestic product (GDP) ratio and a stable balance of trade, concludes Ghatak.

2.14.1   Financial Repression Practice

Reinhart et al. (2011:22-25) are worried that "Governments are once again finding ways to manipulate markets to hold down the cost of financial debt".

With public and private debt at record or near-record levels, reducing public deficits and debt is likely to remain at the forefront of policy decisions in most advanced economies for foreseeable future.

Throughout history, the ratio of debt to gross domestic product (GDP) has been reduced in a variety of ways, including

- economic growth;
- substantive fiscal (spending and taxing) adjustments, such as austerity plans;
- explicit default or restructuring of private and/or public debt;
- sudden surprise bursts in inflation (which reduce the real value of the debt); and
- financial repression – that is, official policies that direct to government use (and usually at below market rates) funds that would otherwise go to other borrowers.

Because these debt reduction channels are not mutually exclusive, debt reductions have often combined more than one of these avenues. Financial repression played an important role in reducing debt-to-GDP ratios after World War II, and it has recently reemerged along with large increases in public debts in advanced economies.

Reinhart et al. posit that financial repression is most successful in liquidating debts when accompanied by a steady dose of inflation, and, like inflation alone, it works with debts denominated in domestic currency. Low nominal interest rates help reduce debt servicing costs, while a high incidence of negative real interest rates liquidates or erodes the real value of government debt. Inflation need not take market participants entirely by surprise and need not be very high (by historical standards).

Reinhart et al. also suggest that the large public and private debts in advanced economies and the perceived dangers of currency misalignments and overvaluation in emerging markets facing surges in capital inflows are interacting to produce a "home bias" in finance and a resurgence of financial repression. While emerging markets may increasingly look to financial regulatory measures to keep international capital *out,* advanced economies have incentives to keep capital *in* and create a captive domestic audience to finance the existing public debt. Concerned about potential overheating, rising inflationary pressures, and related competitiveness issues, emerging market economies are altering their regulatory frameworks to deter foreign investors in their eternal quest for high yields. This offers advanced and emerging market economies a common ground to agree on increased regulation and/or restrictions on international financial flows and, more broadly, the return to more tightly regulated

domestic financial environments – in other words, financial repression. Governments, Reinhart et al. allege, do not call these actions financial repression, of course, but characterize them as part of macroprudential regulation which, as claimed, is designed to ensure the overall health of the financial system.

2.14.2   Goals of Financial Repression

One of the main goals of financial repression is to keep nominal interest rates lower than they would be in more competitive markets, according to Reinhart et al. Other things equal, this reduces the government's interest expenses for a given stock of debt and contributes to deficit reduction. However, when financial repression produces negative real interest rates (nominal rates below the inflation rate), it reduces or liquidates existing debts and becomes the equivalent of a tax – a transfer from creditors (savers) to borrowers, including the government.

But this financial repression tax is unlike income, consumption, or sales taxes. The rate is determined by financial regulations and inflation performance, which are opaque compared with more visible and often highly politicized fiscal measures. Given that deficit reduction usually involves highly unpopular expenditure reductions and/or tax increases, authorities seeking to reduce outstanding debts may find the stealthier financial repression tax more politically palatable.

Liberal capital market regulations and international capital mobility had their heyday under the gold standard prior to World War I. But they began to wane after World War I, with the Great Depression and World War II putting the final nails in the coffin of *laissez-faire* banking. After World

War II, the Bretton Woods arrangement of fixed exchange rates and tightly controlled domestic and international capital markets was put in place. The result was a combination of very low nominal interest rates and inflationary spurts of varying degrees across the developed economies (which here include Australia, Belgium, Canada, Finland, France, Germany, Greece, Ireland, Italy, Japan, New Zealand, Sweden, the United Kingdom, and the United States). Real interest rates in both developed and emerging economies were markedly negative – whether on treasury bills, central bank discount rates, deposits, or loans – and remained consistently lower (negative on average) in the ensuing three and a half decades. Binding interest rate ceilings on deposits (which kept real deposit rates even lower than the negative real rates on treasury bills) induced domestic savers to hold government bonds. That this was occurring nearly everywhere at the time helped delay the emergence of leakages from investors seeking higher yields.

Although another era of freer capital mobility began around 1980, the outbreak of the 2008/2009 financial crisis again sent real interest rates in developed economies increasingly negative. At least four years after, real rates in twenty-one developed economies were negative about half the time and below one per cent about eighty-two per cent of the time, according to Reinhart et al. This overall turn to lower real interest rates occured despite the high rates investors have demanded on securities in several countries that have been teetering on the verge of default or restructuring. Real central bank discount rates and bank deposit rates have also been markedly lower for some time now.

2.14.3   Features of Financial Repression

Undoubtedly, a critical factor explaining the high incidence of negative real interest rates was the aggressively expansive monetary policy (and, more broadly, official central bank intervention) in many developed and emerging economies during the last global financial crisis. This raises the broad question of the extent in which current interest rates reflect the stance of official large players in financial markets rather than market conditions. A large role for non-market forces in interest rate determination is a key feature of financial repression.

Financial repression occurs when governments implement policies to channel to themselves funds that in a deregulated market environment would go elsewhere. Policies include directed lending to the government by captive domestic audience (such as pension funds or domestic banks), explicit or implicit caps on interest rates, regulation of cross-border capital movements and (generally) a tighter connection between government and banks, either explicitly through public ownership of some of the banks, or through heavy 'moral suasion'.

Financial repression is also sometimes associated with relatively high reserve requirements (or liquidity requirements), securities transaction taxes, prohibition of gold purchases, or the placement of significant amounts of government debt that is non-marketable. In the current policy discussion, financial repression issues come under the broad umbrella of "macroprudential regulation" which refers to government efforts to ensure the health of an entire financial system, according to Reinhart et al.

Under the circumstance, financial repression may be adopted through a desire to influence the distribution of investment in the economy or to facilitate extortion by those responsible for allocating funds.

2.15 FINANCIAL REPRESSION HYPOTHESIS

The financial repression hypothesis is also based on the work of McKinnon and Shaw (1973:62-80). The McKinnon-Shaw thesis contends that the financial sector is growth inducing but when repressed becomes a fetter or an obstacle in the path of economic growth and development.

This crucial role of the financial sector arises from the channelling of household savings to investors. McKinnon and Shaw argued that the interventionist policies of the government in the financial system of the developing countries are the main obstacle in the attainment of real positive growth. This intervention takes the form of ceiling in deposit and/or loan rate which is often stipulated in nominal terms resulting in low and sometimes negative real rates of returns of financial assets in the face of high inflation.

The consequences of such intervention are analysed by McKinnon and Shaw particularly as they affect savings, investment as well as the fragmentation of the economies of the less developed countries (LDCs).

How they reduce the level of private domestic savings in general and savings through financial institutions in particular are quite sensitive to real rates of returns on physical and financial assets, according to McKinnon and Shaw.

On investment, McKinnon-Shaw thesis observes that demand for loanable fund is interest elastic in less developed countries (LDCs). With the assumption that investment opportunities are abundant in these less developed counties vis-a-vis limited supply of deposits to the financial institutions, there arises a situation of excess demand for loanable funds.

According to them, this excess demand for loanable funds results in inefficient allocation of resources. Consequently, financial institutions resort to non-price rationing of investment funds on the basis of quality of collateral, political pressures, loan size e.t.c.

Interest rate ceiling discourage risk-taking by financial institutions since low yield investments appear perfect and relatively easy to finance. The result is that a small group of economic units is favoured at the expense of others. Thus, financial repression is held responsible for both the smallness of available loanable funds and their misallocation.

McKinnon-Shaw attributes financial fragmentation in LDCs to the repression in the organized financial market of their economies. They observed that the interest rate of non-organised sector is higher than the rate of organized sectors. Thus, to eliminate this dualism they argue that there must be a change from financial repression to financial liberalization.

From the foregoing, McKinnon-Shaw hypothesis attempts to highlight the negative impact of the various aspects of imposition of controls on financial structure and development and argues strongly in favour of reliance in market forces. They argue that freeing domestic financial markets allows interest rates to reflect the true scarcity of capital in developing countries.

McKinnon (1973:19) separately suggested that nominal interest rate ceilings creates a repressed level of private savings since private savings are quite sensitive to the real returns on physical and financial assets and their stability. The preoccupation of Shaw's own analysis was that financial sector of an economy does matter in economic development and can assist in the breakaway from plodding repetition of repressed economic performance to accelerated growth which if repressed and distorted can intercept and destroy impulses to development.

He contented that shallow finance, which distorts financial prices such as interest rates, reduces the real rate of growth and the real size of the financial system relative to non-financial magnitudes. Shaw believed that a strategy of financial liberalization has the effect of deepening finance and invariably enhanced development.

Therefore, in the view of the proponents of the financial repression hypothesis, market forces and financial liberalization would bring about an optimum financial structure and development as well as the efficient mobilization of savings and credit allocation.

In a related development, the restrictive monetary and fiscal policies used by the United States government to halt inflation in 1968-9 led to the disastrous recession of 1970 without much influence on inflation, declares Nwega et al (1990:7).

Moreso, according to Nwankwo (1980:108), "In 1973-74, restrictive policies were responsible in bringing about the worst recession since the great depression of the 1930s.

2.15.1 Empirical Evidence on Financial Repression Hypothesis

There is a growing number of empirical studies indicating that interest elasticity of savings in developing countries might be sizeable enough to grant the efficiency of policies aimed at raising interest rates in other to encourage capital formation.

In the midst of the disagreements over the influence exerted by interest rates on the volume of savings, Fry (1979:466-70) examined the substitution and income effects on savings. He argued that while interest rates may stimulate savings by making future consumption less expensive relative to current consumption (substitution effect). It may also tend to reduce savings necessary to buy a given amount of future consumption (income effect). Based on the experience of Asia and Latin American countries, Fry (1982:78-88) concluded that the substitution effect is more important although not overwhelming.

The above theoretical ambiguity therefore make it imperative to highlight a number of empirical studies carried out both in developed and developing countries on whether or not savings is interest elastic. In the United States of America, more than any other country, empirical studies have been done on effect of increase in interest rates on savings. Wright (1969:44), Blonder (1975:67), Boskin (1978:81), Gylfason (2006:48) confirmed the positive effect of increase in interest rates on savings.

However, there has been conflicting evidence as to the effect of interest rate on savings in the United States. Studies by Thornton (1991:5-7), Friend (1983:39) and Evans (2007:32) showed little or no interest elasticity for savings. The foregoing empirical studies are based on

developed countries where financial markets are relatively well developed and where private investment constitutes significant share of total investment. In countries with less developed financial markets or in those where investment is overwhelmingly the responsibility of the public sector, interest rates may have a significant effect on the mobilization of household savings and on investment decisions.

In Ghana, studies by International Monetary Fund (IMF) show that during the period 1976 – 1980, interest rates never exceeded 13 percent, while inflation was at the roof tops. This strongly negative real interest rate caused serious capital flight from banking deposits and financial savings declined consistently during this period. However, the trend was interrupted only in 1979 when time deposits actually grew slightly in real terms as a fall in the inflation rate moderated the loss to depositors.

In studies carried out by IMF (1983) there is evidence from the experience of a number of countries (including Ghana) that the real return on deposits has a significant effect on the volume of mobilized institutional savings.

In Jamaica for instance, during the period 1977-1980, interest rates were much below inflation rates, which resulted in a steady erosion of time, and savings deposits in real terms. In Brazil, a brief departure from maintaining interest rate commensurate with inflation gave rise to highly negative real interest rates in 1979-1980 and this brought an immediate response from savers. The policy of negative real rate in 1979-1980 caused a decline in the real value of financial savings.

Other more striking results obtained by liberalizing repressed interest rates can be shown in the case of Argentina and Turkey.

However, before interest rates were liberalized in Argentina beginning in 1976, real interest rates were strongly negative. This led to the practical disappearance of time and savings deposits as they declined by over 70 percent then. Meanwhile, when interest rates were allowed to rise to remunerate savers more adequately for the effects of inflation, deposits rose rapidly in response and by 1981 they were more than double.

The response of savers to change in real interest rates as time and savings deposits nearly tripled in real terms in 1981 after a shift in policy that resulted in a substantial improvement in real interest rates which has previously been sharply negative.

In Nigeria, studies relating interest rates to savings over time still remain largely in unsettling controversy. While Okigbo (1981:58), Ajayi and Ojo (1986:213-24), Oyejide (1998:9) and Teriba (2002:21) argue that interest rate is an insignificant factor influencing savings in Nigeria, others like Owosekun (1978:37), Ikhide (1990:33) conclude that it is significant.

However, Soyibo and Adekanye (1992:9) noted that most of the above studies used nominal interest rates as opposed to external real interest rates, which in theory is known to affect savings and investment decisions. They conclude that real interest rate has a significant impact on saving mobilization and suggest that the Nigerian environment may be a fertile ground for the successful operation of financial liberalisation with qualification that other complementary policies are a *sine-qua-non* to the successful operation of a policy of financial liberalisation.

The above empirical evidence therefore reveals according to Soyibo and Adekanye, the applicability of the McKinnon-Shaw hypothesis to Nigerian

situation, although Shaw's evidence is more strongly supporting. All these therefore suggest that although the financial system liberalisation policy in form of interest rate deregulation would lead to increased mobilization of savings, but in order to influence economic growth positively. It needs to be transmitted to investment.

2.16 BACKGROUND AND FRAMEWORK OF DEREGULATION IN NIGERIAN BANKING INDUSTRY

2.16.1 Background History

The Nigerian banking scene before 1986 was characterized by the systematic changes aimed at promoting banking activities in the country. These changes may be grouped into four broad headings namely:

- The era of the free banking (1894-1952)
- The era of limited banking regulation (1952-1958)
- The era of intensive regulations (1958-1986)
- The era of deregulation (1987- date)

During the era of free banking (1894-1952), banking business was monopolized by foreign banks viz Bank of British West Africa later Standard Bank, Barclays Bank etc. and National Bank of Nigeria. This period was marked by two main features notably lack of banking legislation and establishment of banks in Nigeria.

The law applicable during the period was the principle of common law and statutes of general application to the British colonies to which Nigeria was one. No emphasis was however laid on banking legislation.

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The era of limited banking regulation, (1952-1958) was heralded by the promulgation of the Banking Ordinance of 1952 to check the menace which the unregulated banking industry posed for the nation's economy. The ordinance heralded among others and provided for the following:

—Minimum paid-up capital requirement of ₦25,000.00 for incorporation of new banks in the country (Nigeria).

—Foreign banks not incorporated should have evidence of paid-up capital of N200,000.00

—All new banks to obtain licenses from the finance secretary before commencement of operations.

—All banks to submit to the finance secretary evidence of adequate degree of liquidity.

The era of intensive regulation (1958-1986) began with the enactment of the Central Bank of Nigeria Act of 1958, which gave legal backing to the establishment of the Central Bank of Nigeria. The Act empowered the Central Bank of Nigeria to promote the development of the Nigerian financial system and to maintain the country's financial sector on an even level.

The other sources of banking regulations during this era, included the Exchange Control Act of 1962 and the Banking Act of 1969. The banking Act of 1969 generally provided for the regulation and control of monetary and financial system. It specifically made provisions for granting of licenses to banks while imposing restrictions on the activities of licensed banks.

It also made provision for the CBN to exercise its power in maintaining monetary and financial stability in the economy through the stipulation of liquidity and capital adequacy requirements.

Experience has however shown that while the regulations ensured the viability and stability of the banking industry. They tended, through their prolonged use, to reduce the competitiveness and efficiency of the industry. The intervention brought about the domineering role of government in the economy in spite of growth of the private sector.

Consequently, financial repression and reduced intermediation pervaded the financial sector while foreign exchange allocation did not go to areas of most productive use. It became clear that the regulatory orders and directives, which led to creation of this distortion, need to be corrected in the eighties.

Hence, the adoption of major changes in development strategies and domestic policies, which stressed outward orientation, economic liberalization and deregulation.

2.16.2   The Effects of Repression

Prior to deregulation, the financial repression is characterized by policies of directed credits, interest rate ceiling and heavy reserve requirements. Thus the "economy reduced the alternativeness of holding claims on the domestic banking system" Soyibo (1994:14).

The financial repression also leads to the "fragmentation of the capital market, and thus promoted the development of informal financial sector"

Hugon (1990:21-32). The fragmentation of the capital market by the financial repression also led to the following consequences:

- Reliance on self-finance by potential investors due to reduction in the flow of loanable funds through the organized banking system.
- Arbitrary variation in interest rates between classes of favoured and disfavoured borrowers.
- The impairment of the process of self-finance makes accumulation of liquid assets difficult and thus reduces investments.
- Reduction in the level of financial dependency of firms outside the repressed banking system.

In overcoming these distortions and problems emanating from financial repression, deregulation of the industry in form of liberalization of the interest rates on bank deposits and loans as well as eliminating credit controls is prescribed (McKinnon-Shaw hypothesis). In line with this, Nigeria therefore moved towards the deregulation of its financial system in 1987.

2.16.3 Nigerian Experience of Banking Deregulation

The deregulation of the financial system is defined as the systematic removal of regulatory controls, structures and operational guidelines Ojo (1991:5). Hence, in order to remove the disincentive to initiative and innovation that Federal Military Government in line with the intentions of Structural Adjustment Programme (SAP) deregulated the Nigerian economy and the banking sector:

- Interest rate structure liberalization

- Sectoral allocation of credit
- Deregulation in the registration of new banks in order to increase competition.

Accordingly, the Central Bank of Nigeria on 31st of July 1987 issued the monetary policy Circular No. 21 which abolished all controls on interest rates. Consequently, deposit and prime lending rates are left to be determined by the forces of demand and supply in the financial market.

However, the Central Bank of Nigeria affirmed to fix its minimum rediscount rate, which served as a signal to the direction of interest rate change. As a means of encouraging the private sector non-bank public to invest in government securities, the treasury bill rate was also raised from 10 to 14 percent while comparable adjustments were made to treasury certificates and the minimum liquidity ratio for banks was raised from 25 to 30 percent.

In respect of sectoral allocation of credit, categories of sectors of the economy for purposes of bank lending reduced from four to two namely, the high priority sector comprising agriculture and manufacturing enterprises and other sectors.

The deregulation era began with the introduction of the deregulated foreign exchange market in September 1986 based on an auctioning system. Partial liberalisation of interest rates was attempted in April 1987. In September 1987 full liberalisation of the interest rates was undertaken as the Central Bank of Nigeria (CBN) ceased to prescribe interest rates on deposits and loans.

At the same time, deregulation in the registration of new bank was introduced. In 1988 a first step towards bank restructuring saw that banks were allowed to own shares in non-financial businesses as well as engage in insurance brokerage. The establishment of the Nigeria Deposit Insurance Corporation (NDIC) by Decree 22 of 15th June 1988 commenced the operations of deposit insurance in March 1989.

The NDIC is charged with the responsibility of insuring bank deposits, ensuring safe and sound banking practices through effective supervision, and assisting the Central Bank of Nigeria to formulate banking policies with a view to ensuring the stability of the financial system.

By 1990, new financial institutions like finance houses, community banks, the people's bank and mortgage banks began to spring up. New prudential guidelines were also introduced.

The concern for the health and soundness of the financial system led to the promulgation of the Central Bank Decree 24 of 1991 and the Banking and Other Financial Institutions Decree (BOFID) 25 of 1991. The government embarked on the privatisation of banks in which it has major shares in 1992. In 1993, five banks were taken over for restructuring while three discount houses began operations in the same year. The problem of policy credibility resurfaced in January 1994 when interest rate deregulation was threatened.

It should be noted that the design of the deregulation programme was more reactive than proactive; as it does not appear that any explicit consideration was given to the problem of macroeconomic instability.

Similarly, no explicit consideration was given to the health of the financial sector and its initial condition as reflected in the delay to introduce the prudential guidelines and to promulgate both the CBN decree and BOFID until 1990 and 1991 respectively.

Sequencing issues and speed of reforms were also given very minimal attention. Apart from the "stop-go" action of government on the policy of interest rate deregulation, full deregulation was started nine months after embarking on partial deregulation. Interestingly, it has been all along fully deregulated.

Again, referring to the "Nigerian Factor" hypothesis, we have come to know that the best of programmes do not yield the desired results in Nigeria, simply because of poor implementation. So, Structured Adjustment Programme (SAP) and by extension, the liberalisation and/or deregulation of interest rates e.t.c. stood no chance of success under succeeding regimes that unabashedly promoted corruption and "settlement".

The mounting distress in the financial sector led to the government promulgation of the Failed Banks and Financial Malpractices Decree 18 of 1994 which aimed at serving as a deterrent to prospective bank promoters, management and staff who may intend to enter the industry and abuse it for personal enrichment and the consequent impoverishment of society, Adewunmi (1995:11-12).

But the decree while punishing offenders, failed to address the reformative and restorative objectives. Therefore, it will be necessary to incorporate a non-performing asset management agency into decree Soyibo (1996a,b). A

call that has led to the creation of Asset Management Corporation of Nigeria (AMCON) and became operational in 2011.

Olajide (2011:63) warns, "the resolution of the banking sector crisis in Nigeria is not guarantee against another crisis in the future". It is true that with the average capital adequacy of 20 commercial banks now at 17.12 per cent and also Nigerian banks are now the most capitalised in Africa. Yet, whilst it is very obvious that the nature of banking has changed as a direct consequence of the reforms and no doubt useful lessons have been learnt, the experiences and events of the past few years, the responsibility falls on all stakeholders working in collaboration to prevent the next crisis and create a durable framework for financial stability.

Banking therefore, needs to move away from swashbuckling, deal-making accent it has acquired in recent decades, back to the traditional, conservative ethics that emphasises trust between banks and their customers.

2.17   STRUCTURE OF INTEREST RATE IN NIGERIA

The structure of interest rate refers to the spread of interest rates paid on assets on the same type but with different terms of maturity. The concept is relevant only to fixed interest, fixed-term financial assets such as government gilt-edged securities or fixed-term loans with contractually fixed interest payment. It refers to a situation where the term "maturity" is assumed to be the major factor affecting the rate of interest such that short-term securities attract lower rates of interest than long-term securities.

The structure of interest rate is so diverse and complex because a large number of different rates co-exist on the financial market at any point in time. Apart from terms of maturity, differences in interest rates are also due to risk of default, tax treatment and marketability of financial assets.

In Nigeria, there is the crucial role of risk or return on asset determination. This risk premium explains why interest rates or yields on government's securities are lower than that of corporate bonds and stocks. Government securities that are deemed to be risk-free attract no risk premium while bonds carry high premium because of the possibility of business failure. While it is true that depositors are wooed by using high interest rates many depositors as a result of the distress syndrome in the financial sector now attach more importance to safety of their deposits than yields.

There are three major categories of rates in Nigeria and these are:

1. Rediscount rates,
2. Deposit rates, and
3. Lending rates

The Rediscount Rate is the rate at which the Central Bank as a lender of last resort exerts a measure of control over the credit operations of the banking system by altering the rates of interest, which it charges on its loans to the banks. This rate influences the degree of willingness of banks to borrow from the Central Bank and the volume of their loan and investment.

Other rates that fall within this category are treasuring bill rates, treasury certificate rates and rates charged on the Federal Government Development Stocks.

Deposit rates are the rates of interest, which commercial banks pay on the amount of money deposited with them. The amount deposited can either be in form of savings deposit or time deposit. Savings deposit rate are fixed for the life of the deposit while time deposit rates vary according to the maturity of the deposit.

Lending rates are the rates which financial institutions charge on advances to their customers. It can be nominal or real lending rates, either minimum or maximum.

2.17.1   Objectives of Interest Rate Policy in General.

Interest rate is an important policy tool or instrument used by governments to stimulate or direct certain macro-economic variables towards achieving set targets. It can be in form of substantial deliberate manipulations or minimal interventions, with an implied dependence on the natural forces of the free market system, introduced by the government, depending on the objectives for which it is introduced.

According to Chandavarkar, "an interest rate policy may be defined briefly as any official action designed to influence the level and structure of money rates of interest through statutory means, money market intervention, or moral suasion to attain given ends of credit policy and to help in the mobilization of saving through financial media". Because of the undeveloped character of the money and security markets in some undeveloped economies, and the limited reliance on central bank credit, both open market operations and bank rate changes have limited usefulness, he insists. Consequently, in practice, official regulation or deregulation as the case may be mostly takes the form of interbank

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agreements, either voluntary or statutory. This he avers, takes into account the statutory powers of central banks to influence directly the rates on deposits and loans.

But "it is largely as a result of introducing social considerations that the policymakers face a real dilemma, when it comes to the choice of an appropriate level and structure of interest rates" Chandavarkar. In fact, the case for a pragmatic approach to interest rate policy based on modification of the market price mechanism by extra-market criteria is even stronger in the less developed countries, owing to the greater imperfections of the money and capital markets and the stronger element of officially determined priorities in the allocation of capital funds, according to him.

Although, the objectives differ from country to country, the primary objectives in most developing countries relate to the promotion of the rate of economic growth and development, efficient allocation of scarce resources and even distribution of income.

The objectives of interest rate policy in Nigeria are normally embedded in the broad objectives of the money credit policy, according to Sanusi (1998:8) and Oresotu (1991:45-55) namely:

  i.   Moderation of inflation rate

  ii.   Reduction of pressure on balance of payments and exchange rates

  iii.   Enhancement of external reserves

  iv.   Operation of efficient financial system and

  v.   Inducement of increased financial savings, investment promotion, economic growth and increase in the level of employment.

The stimulation of savings and investment was stated in 1990 as one of the objectives of interest rates policy in the monetary and credit policy guidelines. The CBN monetary and credit policy guidelines on interest rates policy aim at achieving macro-economic stability and to promote investment in the productive sectors.

Substantial reduction in inflation, re-establishment of public confidence in the banking system, enabling environment for full deregulation of interest rate, positive interest rates in real terms and control of excessive rise in interest rates.

The above macro-economic variables are interrelated so that policy measures applied to achieve one goal will definitely affect the outcome of the others in the process of restoring internal and external economic equilibrium. Thus the pursuit of appropriate interest rate policy will improve the efficient operation of the financial market with consequent effect on savings mobilization, investment, employment and growth.

Prior to 1986, the level and structure of interest rates were administered by the CBN as part of the broad monetary and credit policy decisions largely to obtain social optimum in resource allocation, to promote orderly growth of the financial market, to combat inflation and lesson the burden of internal debt servicing on the government.

During this period of administered interest rates, the Nigerian economy was sectionalised into preferred, less preferred and other sectors in the course of implementing the credit policy. Such classifications allow the government to direct financial resources at concessionary interest rates to priority sectors. These rates were typically below the minimum rediscount

rate which was quite low averaging 7.75 percent between 1980 and 1985. The era of administered interest rate was characterized by the following.

First, the nominal interest rates were unable to keep pace with inflation, resulting in negative real interest rate.

Second, the demand for credit exceeded the rate of savings; hence a large proportion of government borrowing had to be financed by the Central Bank of Nigeria.

Thirdly, the classified preferred sectors could not have access to funds partly because financial institutions were unable to raise sufficient loanable funds through savings or from the money market at the favoured rate of interest.

Finally, the low interest rate regime resulted in efficient production and excessive demand for credit.

2.17.2   Interest Rate Management in Nigeria

Interest rate management refers to the totality of steps and processes designed and used by the monetary authorities (the CBN) to determine, sustain or support the level of interest rates in an economy in ways that engender the achievement of the stated macroeconomic goals of price and exchange rate stability, rapid and sustainable employment, and generating growth.

It also entails anticipating the financial markets and developing appropriate policy measures to impact the markets using known monetary tools.

Management of interest rates need to also ensure that rates do not fall to levels where the liquidity trap ensnares the economy. By liquidity trap we mean the level of interest rate below which further reduction will not impact on the levels of economic activities/national income. Of course, there is only one way to find out whether we have found the right rate or not, and it is quite simple: The extent to which the policies enabled the economy to grow. Our policies so far have failed to grow our economy. And, failure in this regard can be and has evidently been, quite expensive.

Interest rates continues to be market-driven. In this regard, the CBN influences the level and direction of interest rate movements through changes in its Minimum Rediscount Rate (MRR) to reflect the prevailing market condition. Any unusually wide spread between the deposit and lending rates is unacceptable due to its serious implications for savings and investment growth. And, to address this problem, a more competitive financial environment is always engendered, through improved enlightenment of the investing public on alternative investment opportunities in the financial market.

As it is now obvious that the interest rate is a very crucial tool for macroeconomic management. It is government's duty, therefore, to determine the correct rate of interest to drive the economy. As the former MD/CEO of Reliance Bank Ltd, Abayomi Majekodunmi, reiterates: "Interest rate is an instrument used by the government to determine and achieve the desired quantum of money in circulation in order to achieve a desired level of inflationary rate". It is undoubtedly a solemn and critical duty.

Unfortunately, as Agu (1988:19-31) rightly observed, there is also the problem of time inconsistency which plagues government policy making. Under this concept, governments over time decide on a certain course of action only to find later that they no longer wish to pursue that line of action and so adopt another policy or even outright reversal. And, the public on their own, wallowing in a pall of pessimism, never having faith or trust that the government will live up to its billings, take actions overtly or covertly to ensure survival.

However, a clear pattern emerged in the interest rates structure of deposit money banks since the Central Bank of Nigeria (CBN) undertook to guarantee interbank transaction in 2009 and introduced the monetary policy rate within an asymmetric corridor. At its meeting April 2010, the Central Bank's monetary policy committee (MPC) noted that average interbank call rate declined from 2.89 percent as at end – December 2009 to 1.50 percent in March 2010. Over the same period, the securitised open–buy–back rate fell from 2.64 percent to 1.31 percent.

But the new measures appear to have had little effect on the average savings rate which stood at 3.38 percent in February 2010 because the weighted annual average savings rate fluctuated between 3.20 and 3.83 percent since 2005. However, the consolidated deposit rate dropped from 6.13 percent December 2009 to 5.53 percent in February 2010. (Media reports early in April indicated that deposit money banks have further slashed the rate to 4.0 percent). Despite the falling deposit rates, in February 2009 the average maximum lending rate were 18.28 percent and 23.32 percent respectively.

The MPC and some other quarters have expressed concerns over the ensuing widening spread between the average consolidated deposit rate and the average maximum lending rate which in February 2010 rose to 17.79 percent. But when viewed in perceptive, the gulf noticed in February if sustained throughout the year would only make 2010 to rank a distant sixth behind 1997, 2003, 1993, 1999 and 2002 in ascending order of the widest average annual spread since 1990. Over the period, only five years (the last being 1996) recorded upper half single digit percental spread. In the rest of the years the spread ranged from 14.82 in 2007 to 26.04 percentage points in 2001. High interest rates and wide gulfs between deposit and lending rates are signs of inefficient monetary policy management.

The MPC attributed the current low and falling deposit rates to the availability in the banking system of surplus finds emanating from fiscal operations. The committee also ascribed the high lending rates "to inefficiency in cost management and unrealistic profit expectations and targets" of deposit money banks as well as to their risk aversion. Amid persistent tight credit conditions, net bank credit to government rose in February 2010 while bank credit to the private sector declined. This result, interestingly, served as justification for convening the special meeting of the monetary policy committee in April 2010, during which steps were taken to hasten the injection of additional ₦500 billion to finance real sector projects.

Guardian Editorial (2010:14) is of the view that the CBN plan would only compound the existing glut of funds in the system and worsen the federal fiscal deficit. Rather than descend low to assume the role of, and compete

against, deposit money banks in providing funds to investors, the CBN should concentrate on core central banking policy options in order to address the reluctance of banks to lend to the private sector. For instance, it is curious that the MPC failed to mention talk less explain why the risk-free treasury bills and associated restructured bonds used to help contain excess liquidity were and still being offered at very high interest rates. Treasury bills attracted 26.50 percent interest in 1993, says the Guardian, but the current rate is lower.

The high rates paid on these instruments serve as a means of unearned income for banks and act as a depressant against lending to the private sector. Worse still, foreign direct investors in the existing universal banks through their subscription to treasury bills and the federal bonds (which are not invested but sterilised as their sole purpose is for liquidity surfeit control) garner and drain from the country's foreign reserves over US $300 million monthly. It is an unsustainable and unacceptable waste that must stop, the Guardian warns.

While the MPC was rightly categorical about not fixing lending and deposit rates by fiat, the CBN cannot shirk the responsibility for setting interest rates for financial instruments used for monetary policy management. Clearly, when interest rates paid on such treasury bills and restructured (treasury) federal bonds appropriately drop substantially below the minimum deposit rate that is available in the banking system, those financial instruments will cease to be a source of unearned income generation. At that point, in order to survive, deposit money bank will, like banks in focused economies, actively scout for viable small-scale,

medium-scale and large-scale real sector projects including various types of infrastructure to finance at competitive lending rates.

Inducing competitive lending rates ties in with another CBN statutory responsibility of caging inflation. The MPC fears of "real threat of inflationary pressure in the near-to-medium term" and CBN governor's assertion that inflation would stay in the lower double digit for some time are groundless and only betray both parties apparently feigned lack of understanding of the true cause of high inflation in the country.

There is no gainsaying the fact that most situations in life involve trade off. You have to decide what level of the bad to compromise with to get a certain level of the good. This is saying in effect that it may not be possible to reduce the inflation rate further without creating other undesirable effects.

Rather than concentrate solely on controlling inflation through money supply, efforts should be made to increase the supply of goods and services. No matter what is done to credit expansion, the prices of goods and services will continue to increase as long as these goods are not available in desirable quantities.

If the naira to dollar exchange rate can be improved, as observed by Ojo and Adewunmi (2005:20), much of the inflationary pressures in the economy will be eased and manufacturers and investors alike will be able to get imported raw materials and capital goods at reduced costs and this will inevitably lead to fall in prices and therefore inflation.

Nigeria's sharp recent interest rate hike will make it harder for the private sector to access affordable credit from banks, which is needed to drive

growth in the sub-Saharan Africa's second-largest economy, says the finance minister. In her words, the then Co-ordinator of the Economy Ngozi Okonjo-Iweala said interest rates needed to be balanced carefully to support private sector growth but still keep inflation under control. Nigeria's central bank has raised interest rates six times in 2011 alone to curb inflation and support the local currency. "What we are focussing on is how this banking sector can now work with the real sector and really spur development... (we need) credit for most of our private sector at reasonable and affordable rates of interest", Okonjo-Iweala said at an industry conference in the capital Abuja October 20, 2011.

Multi-Tex Plc. has lamented the high cost of funds from the local banks in the country, just as it disclosed plans to source for foreign loans of between £7 to £10 million (about ₦2.5bn) to boost its working capital.

The Chief Executive Officer, Multi-Tex Plc. Mr. Dimeji Owofemi disclosed this at the company's pre-Annual General Meeting (AGM) press briefing held 11th October 2011 in Lagos, saying: "The greatest challenge the company is facing is borrowing from banks. Our banks in Nigeria prefer short-term fund to long-term fund and that is why the cost of borrowing is very high. So, the Board of Directors has decided to source for cheap alternative foreign funds.

Alawiye (2012:19) has quoted the then CBN governor Sanusi who spoke January 19 at the World Economic Forum in Davos saying "if we do have an expansionary budget plus the fuel subsidy removal, I think the likelihood is more for an increase in interest rate than a cut".

Indeed, the Senate craves for higher oil benchmark that would perpetuate governments profligate spending. But the apex bank's boss reacted swiftly against such moves citing "increase in inflationary pressure that is already in place on the supply side and reduction in accretion to Excess Crude Account of the Sovereign Wealth Fund," according to the punch newspaper reporter.

However, sound economic policies and intentions do not translate to sound economic actions, notes Udenze (2012:6) who spoke at a human rights' rally in Lagos April 6.

Truly, economics does not exist in the abstract but within the institutional contexts. Hence, lack of institutional capacity and so on have always resulted in implementation turning into nightmares.

The decisive factor in industrial regeneration and economic growth is the issue of availability and cost of funds that would spur consolidation and expansion. This position also emerged at the Institute of Financial Consultants "Fellows Forum" on Friday October 5 2012 where the financial sector of the Nigerian economy was again x-rayed.

Rather than bringing down the cost of borrowing to single digit to jumpstart the economy, no succeeding government has achieved this feat to the chagrin of all trade groups such as MAN, NACCIMA, SMEs etc.

As observed in his paper, Mr. Ade T. Williams noted that inspite of contracting industrial activity, the CBN is unable to bring down the cost of funds to Money Deposit Banks below the high, industrially unfriendly rate of over 18 percent. He compared this with the 3 percent or less offered to

banks by Central Banks in more successful economies so that cheap long-term funds become available to the public, particularly the real sector.

As part of critical review of the CBN monetary stance, there should be a correlation between the capital adequacy ratio and the rate of interest on credit to the economy by the banks as a major paradign shift. They cannot continue to declare huge profits to the detriment of the enterpreneural sector, which has remained their support base over the years.

It is pertinent in summarizing to mention Discount Window Operations. In line with the objective of maintaining monetary stability and promoting the development of the money market, the CBN continues the use of discount window operations as a policy instrument to signal the desired direction of interest rates and in accordance with its role as lender-of-last-resort. Transactions are normally conducted in the form of short-term overnight loans, collateralised by the borrowing institutions' holdings of government debt instrumentss and other eligible instruments as stipulated by the CBN. Changes in the rediscount rate will continue to be made in a dynamic manner to complement other policy initiatives and to reflect developments in the money market.

Meanwhile, interest rates continue to be market-driven. In this regard, the CBN continues to influence the level and direction of interest rate movements through changes in its minimum rediscount rates (MRR) to reflect the prevailing market condition. Any abnormal spread between the deposit and lending rates are viewed unacceptable as it portends serious implications for savings and investment growth.

However, one of the concerns of this enquiry is to ascertain relevant aspects of role interest rate policy play in mobilising savings and influencing the general climate for aggregate real savings in less developed countries (LDCs) with the view of drawing lessons for Nigeria.

2.18 RATIONALE AND INSTRUMENTS OF INTEREST RATE POLICIES

An interest rate policy may be defined again as any official action designed to influence the level and structure of money rates of interest through statutory means, money market intervention, or moral suasion to attain given ends of credit policy and to help in the mobilization of saving through financial media. Because of the undeveloped character of the money and security markets in most of these countries, and the limited reliance on central bank credit, both open market operations and bank rate changes have limited usefulness. Consequently, in practice, official regulation mostly takes the form of interbank agreements, either voluntarily or statutory. This takes into account the statutory power of central banks to regulate directly the rates on deposits and loans.

But it is largely as a result of introducing social considerations that the policy makers face a real dilemma, when it comes to the choice of an appropriate level and structure of interest rates. In fact, the case for a pragmatic approach to interest rate policy based on modification of the market price mechanism by extra-market criteria is even stronger in the less developed countries, owing to the greater imperfections of the money and capital markets and the stronger element of officially determined priorities in the allocation of capital funds.

2.18.1   Interest Rates in Various Sectors and Regions

Unorganised sector: One of the characteristic features of the less developed countries is the prevalence of high interest rates, ranging typically from 24 per cent per annum to 50 per cent and above in the unorganised sector, where credit is supplied by moneylenders and noninstitutional bankers, according to Chandavarkar.

But these superficially high nominal rates of interest, which can range up to 300 per cent per annum, overstate the real price of loanable funds in the unorganised sector. As has been noted, "nominal interest is kept in these conditions, at fantastic levels. But this is mainly a device to keep the peasants permanently in debt. The actual payments exacted cannot exceed the margin between subsistence and rent," declares Robinson (1967:290).

Of course, the fact remains that debtors do owe the high nominal interest charges even if they cannot afford to pay them out of current income. The figures of rural rates based on detailed field investigations, conducted by Tun Wai (1976:80-142) such as those of the All-India Rural Credit Survey, show the normal upper limit of rates to be about 50 per cent. Tun Wai's estimates placed the world-wide weighted average of interest rates in the unorganised sector of the less developed countries within a range of 24-36 per cent. Assuming that effective rates in the unorganised sector are within a range of about 24-50 per cent, those would still be regarded as high in absolute terms as well as relatively to those in the organised sector (typically about 10-12 per cent) of less developed economies and in the developed economies as a whole. On the other hand, the comparable rates for consumption loans in the developed economies are also recognised to

be nearly as high as the lower level of rates for noninstitutionalised credit in the less developed countries according to Sen (1974:30-51). The 1998 Nobel Price winner in economics.

Although there are no adequate data, Sen alleges, it is desirable to assume that it is the unorganised sector, with its high interest rates, that finances the bulk of total credit requirements in most of the Asian countries, whereas the organised sector, with its comparatively low rates, finances about one-fourth of the aggregate credit. Indian experience in this matter, which may be assumed to be not untypical of Asia as a whole, is revealing. The Indian Central Banking Enquiry Commission in the 1930s estimated the share of unorganised banking at about 90 per cent. The All-India Rural Credit Surveys in the 1950s and 1960s showed that this ratio had not changed significantly despite the impressive growth of institutional banking facilities; organised banking was found to account for merely 15 per cent of total credit in rural areas, following the report by Bank of India Bulletin in 1965.

The relative shares of different credit agencies in financing the credit requirements of rural households in India in 1961-1962 were as indicated in Table 2-6.

These facts pose a paradox: what is the role of interest rate policy in countries where nominal rates of interest for the most part are high enough to reward the effort of saving and where the problem therefore is really to reduce the cost of credit. In fact, the existence of usury laws in many developing countries points to the need to reduce the high average rates of interest on loans by eliminating the high-risk premiums and monopolistic

profits in the money lending business. But the paradox presented by these facts is more apparent than real. For one thing, the high rates of interest in rural areas are exclusively lenders' rates that are applicable only to loan transactions and not to deposit transactions. Moneylenders do not usually accept deposits, and in the event of acceptance the rates are far below those for loans. This highlights one of the distinguishing features of non-institutional banking in developing countries, namely, the virtual absence of any link between deposit rates and loan rates. The latter are therefore in the nature of autonomous rates. The customers of noninstitutional lenders are almost exclusively borrowers (agriculturists and artisans) whose income are too low and fluctuating to enable them to save and hold their savings in financial forms for any length of time. The high rates of interest charged by lenders consequently have little influence on the propensity of the rural sector to save. Therefore, from this point of view, Sen avers, an appropriate interest rate policy for the unorganised sector should aim at reducing rates to more economic levels through multiplication and diversification of competitive sources of credit and a broad-based programme of improved production and marketing in order to enhance the creditworthiness of the rural borrower.

The organised sector-A critique of the Myrdal thesis of low rates: In the less developed countries, the level of interest rates in the organised sector (comprising commercial banks and other financial institutions, security markets, etc.) tends to be substantially below that in the unorganised sector. They are almost the same as, or lower than, similar rates in the developed countries where savings are much higher, and even where the rates are slightly higher than in the developed countries, it could

be argued that the gap does not fully reflect the relative scarcity of capital that is normally characteristic of such economies. To that extent, the rates are adjudged to be low and therefore unrealistic and inappropriate. Often such judgements tend to partake of *obiter dicta* not substantiated by any detailed analysis or empirical investigation. A conspicuous exception is 1964 Myrdal's analysis of the inappropriateness of low interest rates in the organised sector, which being among the most substantial of its kind, merits critical appraisal as representative of this point of view even though it was made in the context of the insulated credit and capital markets of mostly Asian economies. Its main propositions are highlighted below.

Despite the great scarcity of capital in the less developed countries in comparison with developed countries, it is paradoxical that rates of interest, despite increase over time, are conspicuously low and in fact not as high as in many developed countries. This paradoxical policy has been sustained by a combination of selective and discretionary controls on credit and investment and by concessional finance, and is thought to be justified on the grounds of inappropriateness of high interest rates in developing countries and the insensitivity of investment to interest rate changes in a highly protected economy. Myrdal (1964:44) cites two statements by a spokesman for the Reserve Bank of India (i) Since there are other measures to directly control and regulate investments, is there any point in trying to use the Bank rate for the purpose? (ii) In a largely protective economy like ours, where expectations rule high, dear money loses importance as a deterrent to investors.

On balance, according to Myrdal, a substantially higher level of interest rates in conjunction with a dismantling of discretionary controls would be

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more in harmony with the prevailing scarcity of capital in less developed economies and would induce economy in the use of capital. It would stimulate greater inflow of foreign capital and mobilize more domestic saving in productive forms instead of being dissipated in speculation, hoarding, conspicuous consumption and investment, and purchase of lend (at inflated prices) and foreign securities. It would also bring about a decline in oligopolistic projects and in capital and land values; the later would enhance the feasibility and reduce the cost of large-scale changes in land ownership and tenancy. Since the major portion of government debt is intragovernment debts, higher interest rates would only bring about a change in accounting relationship within the public sector. Insofar, as bonds are held by private persons, higher rates would tend to bolster the rentier class but higher incomes from source would be easy to trace and so tax, even if income from loans in other forms would, as has become, be more difficult to trace.

It is time to examine critically the validity of the Myrdal thesis in the context of developing economies particularly Asia and its policy implications.

A comparison of the relative range of interest rates (Table 2-7) in the developed and less developed countries suggests that Asian countries are in two clearly defined groups, namely, Group I (Burma, Ceylon, India, Malaysia, Nepal, the Philippines, Singapore and Thailand), which has more or less conventional rates of interest that are about the same as or lower than those in the developed countries, and Group II (Taiwan, Indonesia, and Korea), with interest rates that are far above those in the developed countries or other less developed countries. In fact, the nominal

rates in the organised sector in these three countries approximate those in the unorganised sector of the countries that have low interest rates.

In terms of comparative nominal interest rates, Myrdal's generalisation would therefore appear to be valid only for some countries in Group I. Even within this group it would be misleading to generalize about countries in which financial saving shows varying degrees of response to more or less similar levels of interest rates. For instance, even with comparatively low and stable nominal rates of interest the growth of financial saving in Malaysia and Singapore, as shown in subsequent section, has been impressive partly because the real interest rate has been positive, owing to prolonged price stability and the resultant confidence of the investor in financial assets. It would therefore be interesting to compare the real interest rates between the developed countries and the less developed countries that have low interest rates. To illustrate this, the prevailing nominal rate on postal savings in India, the United Kingdom, and Japan and the savings deposit rate in France and Malaysia was deflated by the annual percentage change in consumer prices in the respective countries, using data from the Fund publication, *International Financial Statistics* (December 1963 = 100 for all the countries except Malaysia, in which 1959 = 100). The resultant figures (Table 2-8) show that the real rate on savings deposit was negative in the developed countries in all the years and in India during 1965-67, whereas in Malaysia it was positive in all years except 1967. Although it is difficult to draw any clear-cut inferences from these data, they do suggest that the gap between the real rates in the developed and less developed countries is perhaps not perceptibly greater than that in the nominal rates.

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There is also an interesting parallelism between the similarity of interest rates in the organised sector of the less developed countries and the developed countries; on the one hand, and the relative average capital/output ratios, and the average rate on capital in manufacturing; on the other, Goldsmith (1969:294). This, Minhas (1963:88) says, suggests that as the organised sectors in the less developed economies are developed enclaves, they have more in common with the developed economies than with the unorganised sector in their own countries. Borrowing by the organised sector in the less developed countries is likewise from the same sector and hence it is feasible at the lower rates prevailing in that sector. Neither the governments nor the financial institutions borrow directly from the unorganised sector where interest rates are higher. Thus, the dualism of the financial sector and the co-existence of noncompeting capital markets conceal the fact that the borrowing is from the low interest rate sector, which does not necessarily reflect the overall scarcity of capital in the economy.

The feasibility of government borrowing at low interest rates in the less developed countries reflects, first, the existence of a captive or guaranteed minimum market for government loans arising from statutory requirements stipulating minimum ratios of investments by financial institutions and social security funds in government securities. Such requirements coupled with the paucity of equally safe alternative investment outlets make the market for government securities less competitive in the less developed countries. Consequently, it is arguable that institutional and other investors would hold a substantial portion of their portfolios in government securities even in the absence of statutory

regulations. For instance, Indian experience shows that, even before the imposition of statutory investment ratios, banks and insurers held government securities at or even above the same level that came to be required by statute. It is also not uncommon for financial intermediaries to hold 'excess' (i.e. above the statutory minimum) portfolios of gilt-edged stock. Second, the low rates on government loans are possible because of the strong semi monopolistic position of governments as borrowers in the less developed countries, which stems from the sheer size of their borrowing operations, and the imperfection of the capital market. Last, the fact that government obligations in all economies, developed or less developed are virtually risk free makes their yield correspondingly low and uniform by eliminating the risk premium altogether.

Thus, the capacity of the less developed countries to maintain artificially low interest rates below the real cost of capital controverts the belief that the 'floor interest rate' is higher than in developed countries. This in turn is buttressed by the conventional wisdom that favours comparatively low and stable average interest rates in some of the less developed countries, reflecting the cumulative effect of various factors - intellectual, historical, and institutional. Although it is difficult to indicate their relative importance or historical sequence, it is possible to identify some of the more important influences.

A major obstacle to the adoption of bolder interest rate policies is the notion that a historical level of interest rates – say, in the range of 3-5 per cent – is in some sense a 'normal' level. The notion of a normal rate, however, stems from historical experience in the United Kingdom and elsewhere as well as being a survival from the era of war finance when it

was both necessary and desirable to finance the war effect on the basis of a given and stable basic rate, such as 3 per cent. This experience appears to have strongly coloured the thinking in some developing economies, where one of the implicit assumptions of policies seems to be the desirability of financing long-term development programmes on the basis of low and stable rates. But the notion that a low stable rate is normal becomes increasingly inappropriate in a developing economy, where relative prices, including the interest rate must necessarily reflect relative scarcities of factors and goods.

The historical experience of interest rates in the organised sector in the less developed countries has been one of variations within a comparatively narrow range of about 3-6 per cent, which has probably conditioned the authorities to low interest rates. It may be that within this range, interest rates have had comparably negative effects. But really large changes in the rate of interest – say, 10-20 per cent – might well have a significant effect on decisions about savings and investments. Also, the fact that prevailing levels of interest in the unorganised sector are unconsciously high (20-50 per cent) creates a bias in favour of low and stable interest rates. There is an element of paradox in this attitude insofar as the acceptance of low rates in the organised sector goes together with tolerance of abnormally high rates in the unorganised sector. Logically the case is, if anything, for higher rates in the organised sector and much lower ones than those prevailing in the unorganised rural sector.

To sum up, while one may accept the general validity of the Myrdal thesis in the context of low interest rate countries in Asia, it must be subject to appropriate qualifications.

First, the choice is not between low and high interest rates but between rigid and flexible policies, somewhat along the lines of the Radcliffe Committee's 'three-gears' approach, with rate changes corresponding to low, medium, and high levels. The rate changes can then take the form of fractional variations (fine tuning) or else of larger steps of 1 per cent or more. But in times of high or rapid inflation the three-gears approach may be rendered inoperative, and the situation may warrant dramatic 'quantum' jumps in normal rates to offset the declines in real interest rates.

Second, even with very high rates it would not be possible to dispense wholly with discretionary credit controls because of the imperfections of the credit market, which give rise to qualitative credit rationing as well as the need to take account of social priorities. But higher interest rates would certainly help to reduce the reliance on discretionary controls and would thereby eliminate the major portion of the massive 'disequilibrium' systems found to maintain the existing low rates.

Third, the efforts of higher interest rates on the choice of techniques and the degree of capital intensity may be blunted insofar as purely technological considerations determine the minimum size of plant and equipment in industry and construction. A more salutary effect, however, may be a more rational allocation of capital between the public and private sectors, provided that the public sector borrows its requirements in a competitive market.

Fourth, higher interest rates by themselves may not be sufficiently strong inducements either to drastically alter existing asset preferences, e.g. for land and gold, in less developed countries without a radical change in

savings psychology or else to attract foreign loan capital. Moreover, the foreign exchange gap can be more appropriately bridged by an inflow of aid and equity capital than by loan capital.

Finally, higher interest rates would help to extend the organised sector of finance and to promote financial intermediation and the integration of the money and capital market. The maintenance of nominal interest rates in the organised sector below their true economic level results in a steady attrition of organised finance. Since only the rates in the organised sector are controlled, the rise in real rates of interest will be confined to the unorganised sectors, resulting in a steady diversion of savings to that sector in search of higher rates of return. This may result in an increase of either consumption or direct investment in the unorganised sector, since lenders in this sector are more prone to make consumption loans. Thus, attrition of organised finance is accompanied by a rise in consumption, a fall in investment and savings, misallocation of savings to investment, and inefficient use of real resources.

Another consequence of this process is the possible adverse impact on the monetization of the economy, at least in conditions of rising prices. Inflation functions as a kind of tax on cash balance and leads to a steady decline in the holdings of money and also in financial assets. On the other hand, the pace of monetization could not be said to depend on the level of interest rates.

2.18.2   A Kaleidoscope of Saving Patterns

The potentialities of an active interest rate policy depend on the extent to which the voluntary financial savings of the household sector are

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responsive to variations in the level and structure of interest rates. The available data on the savings patterns of some selected Asian countries, according to the work of Chandavarkar, emphasize, first, the sizable share of the household sector in gross savings (Table 2-9); second, the relatively small proportion of financial assets – between 35 and 45 per cent – except for Japan, 82 per cent, and Ceylon, nearly 66 per cent; and, finally, the overwhelming predominance – more than 70 per cent – of the voluntary component in household savings and the correspondingly negligible role of compulsory and contractual savings. Together these factors suggest a favourable environment for the use of interest rates to stimulate voluntary financial saving by households. In particular, the still negligible role of contractual and compulsory savings, unlike the situation in the developed countries, indicates a much wider potential scope for interest-sensitive savings by households.

This leads to the more difficult question of interest elasticity of personal savings in developing countries on which the available evidence is inconclusive and sometimes conflicting. According to a recent comparative evaluation by Williamson (1968:194) of some of the major determinants of personal savings in developing countries combining both temporal analysis of individual Asian nations and inter-temporal cross-section analysis of a large group of Asian countries, "higher interest rates are associated, if anything, with lower real savings in Asia. The explanation would appear to lie in the fact that the savings and investment decision are highly interdependent not only in Asian household sector but globally... interest rates appear to influence the short-run savings decision." One of the findings of the study was that for Asia the net impact

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of real interest rate movements on personal saving was either negative or insignificant, concludes Williamson.

However, another regression analysis by Gupta (1970:187), using the same variables as Williamson's but a different and more reliable set of primary data on savings for India (estimates by the Reserve bank of India instead of the National Council of Applied Economic Research) arrived at results just the opposite of William's. Gupta's results (Table 2-10) show that while the real rate of interest is not significant at the aggregate level, it is more influential in determining personal savings at the per capita level. Apart from the use of more reliable primary data. Gupta's analysis, unlike Williamson's, which relies on a single rate of interest as the index of return on financial assets, considers the listed real rates of interest as alternatives.

The results of Gupta's analysis (Table 2-11) for India show that in all the equations the coefficient has a positive sign, suggesting that higher real interest rates lead to higher savings.

(a) r_r = short-term treasury bills

(b) r_{lg} = long-term government bonds

(c) r_{lp} = private securities

(d) r_t = commercial bank time deposits

(e) r_s = nonbank savings deposits

Although the econometric evidence on the interest sensitivity of personal savings in Asia is thus inconclusive and conflicting, it points to the potentially greater role for interest rates in the developing economies in general.

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2.18.3   Lessons of High Interest Rate Strategies

Taiwan: Taiwan's experience is of exceptional significance in highlighting the potentialities of a conscious and purposive interest rate policy in an economy subject to the strains of civil war and post-war inflation as well as developmental expenditures. Taiwan is rightly regarded as a pointer and leading exponent of a high but flexible interest rate strategy.

The monetary history of Taiwan since 1949 affords a classic example of conditions in which interest rates become one of the major anti-inflationary instruments. The extent of the inflation that had to be combated and its repercussions on the level of interest rates are brought out in Table 2-11.

But inflationary pressures and rising prices showed no signs of abatement even after the consolidation of the regime in Taiwan after 1945 and, if anything were aggravated by the growing volume of military expenditure and the influx of refugees from the mainland. In this situation, apart from the political difficulties of higher taxation and compulsory borrowing, there was not much hope of evoking any public response to government bonds or of increased accruals to savings bank accounts despite an annual average rate of increase of 85 per cent in wholesale prices, Irvine and Emery (1966:30). Under these conditions, the Taiwan authorities were inevitably led to rely on economic incentives rather than the purely patriotic impulses of the populace. In the monetary sphere this pointed to the use of sufficiently attractive interest rates to induce the public to save more.

But considering the rate of price that prevailed and the fact that interest rates were already high, evidenced among other things by the payment of interest even on current account deposits (3.24 per cent per annum in 1949), it was evident that the authorities would really need to pitch the rate on new savings investments at extraordinarily high levels. The Taiwan authorities boldly broke through the psychological barrier, which so often inhibits the raising of nominal interest rates above conventional levels, by introducing in March 1950 a special system of preferential deposits of one – month, two – months, and three – months maturities carrying a rate of 7 per cent a month (i.e. 12.5 per cent per annum compounded monthly). The choice of very short maturities was significant, in-as-much-as with the high liquidity preference prevailing under conditions of hyper-inflation, it was unrealistic to expect the public to buy bonds of long-term or even medium-term maturities. Thus, initially, the policy comprised a combination of very high interest rates on very short-term maturities. But there was no irrevocable commitment to a policy of rising rates, since this would have undermined the market by introducing investors to hold back in anticipation of further rises. Encouraged both by the response to the new deposits as well as by the decline in the wholesale price index between May and July 1950, the authorities reduced the rate of interest on one-month deposits in July 1950 by one half, to 3½ a month. This reduction led to a slight fall in time deposits, but even so this reaction of depositors proved to the authorities that they had been able to arrive at the 'critical area' in which monetary savings had become responsive to interest rate changes. Nevertheless, the authorities reduced the rate to 3.0 per cent a month on one-month deposits. The cut coupled with the resumption of a

sharp rise in prices may have led to the fall in the preferential interest rate deposits to a very modest level of NT $21 million in January 1951.

The authorities were concerned, however, to ensure that the rise in the deposit rates was not communicated to loan rates, since this would have affected the working capital requirements of trade and industry. Accordingly, the strategy was adopted to ensure a ceiling on loan rates as well as a 'floor' for deposit rates. But the progressive rising of rates on deposits without a corresponding increase in loan rates created an 'inverted' interest rate structure with a negative differential between the preferential deposit and loan rates, since the former were raised to higher levels than the latter. To meet this situation, a 'redeposit facility' was created whereby banks were given the option of placing excess deposits (i.e. those for which they had no immediate outlet by way of investment or loans) in the Bank of Taiwan at rates equal to or above those paid by the commercial banks. This, in effect, protected the commercial banks against losses on the preferential deposits. This facility has proved quite popular with the banks, especially since 1951, as evidenced by the rise of redeposits from NT $6 million in March 1951 to NT $329 in August 1952. The spectacular rise in redeposits reflected the weak demand for credit relative to the growth of bank deposits in response to the high interest rates. The loss suffered by the bank of Taiwan in paying higher interest on redeposits than its earnings from loans and investments was substantially offset by the earnings from US counterpart funds deposits with it. But, more importantly, the net cost of 'redeposit' to the Bank of Taiwan in financial terms was more than offset by its efficacy in combating inflation, an apt example of external economies of the high interest rate policy.

The years 1958-59, in particular, marked the completion of the phase of stabilization that created an environment wherein interest rates could be viewed as a normal instrument of policy. Since that time the authorities have steadily endeavoured to reduce nominal rates on deposits and loans in keeping with the improvement in the overall economic situation, the increase in quasi-money, and the relative stability of the cost of living (Tables 2-12 and 13).

On the whole, the experience of an active interest rate policy in Taiwan has pertinent lessons for other developing countries, even those that may not have encountered rapid inflation or hyperinflation. First, it shows that there is a critical zone even in a hyperinflation within which an appropriate level and structure of nominal interest rates will not only counter the flight from money into goods but also stimulate financial savings. The rationale of the interest rate policy with its primary accent on deposit rates rather than on loan rates derived from the paramount need in a hyperinflation to increase savings by diverting funds from consumption rather than by merely restraining investment. Second, it also emphasizes that an anti-inflationary policy cannot rely merely on the differential between deposit and loan rates unless it also ensures a positive real rate of return to depositors. Consequently, the nominal interest rates were pitched high enough – in fact far above levels that are regarded as conventionally normal – yield a reasonably attractive real return to the saver. For the greater part of this period 1952-58 the real rates of interest on deposits were positive but well within the conventional range of rates, despite the high nominal rates. Likewise, over the years the gap between the nominal and real rates of interest has been progressively narrowed, attesting to the

feasibility of a policy of fixing nominal rates in increasingly closer approximation to the real rates. Third, it highlights the scope of central bank support of an 'inverted' interest rate structure consequent upon a high interest rate strategy.

Another feature is the flexibility of interest rate policies in Taiwan as evidenced by the subsequent lowering of lending and deposit rates that was associated with a corresponding rise in the ratio of liquid assets, including quasi-money, to GNP. Thus, the ratio increased from 9.6 per cent in 1953 to 37.4 per cent in 1969, whereas the rate of interest on one-year savings deposits declined from 24 per cent to nearly 10 per cent. This suggests that the disincentive effects of falling interest rates were more than offset by the stimulus to the general propensity to save by the rising levels of income and the progressive strengthening of confidence in the currency. Thus, the overall strategy had two broad phases. In the first phase nominal interest rates were pitched sufficiently high, or at rising levels, to stimulate financial savings. The levels at which financial savings became responsive to interest rate increases may be described as the first stage of 'criticality'. This is the point at which the inflationary psychosis may be said to have been effectively countered. But it was obviously not necessary to maintain rates at this level because, once deposits became responsive, the momentum imparted by the initial rise in rates could be depended upon to sustain future increases in deposits, provided that other factors were favourable. The second stage was reached when the impact of falling, or low, rates was more than offset by rising incomes and confidence, so that despite the lowering of rates there was a progressive rise in financial savings.

Although there are no adequate data covering the whole period, there is reason to believe that the share of unorganized finance in Taiwan gradually declined as a result of the policy of realistic rates in the organised sector. A sample survey by Wilber (1969:80-142) of the flow of funds of private enterprise in 1968 showed that the share of the unorganised sector (excluding nonfinancial institutions) in the money and capital market had declined from nearly 45 per cent in 1964 to about 38 per cent in 1967. The impact of the high interest rate strategy on the unorganised sector is also indicated by the progressive decline in the average free market rate for unsecured loans over the period 1949-69 from about 208 per cent to 28 per cent.

It is more difficult, Wilber claims, to evaluate the efficacy of high interest rates in stimulating total private savings in Taiwan, even though the ratio of private savings to GNP did improve over the period as a whole from about 3 per cent in 1953 to a range of 10-13 per cent in subsequent years. There is, however, no consistent trend in the aggregate private saving in relation to GNP, Wilber. This, of course, follows from the absence of a determinate causal link between interest rate changes in financial media and the aggregate real savings of the private sector.

2.18.4　　Interest Rate Reforms in Korea

The successful experience of Taiwan is the use of interest rates as an anti-inflationary weapon also stimulated the interest of the Korean authorities in the possible adoption of similar measures as part of a wider stabilization programme for the Korean economy, which had experienced persistent inflation following the political division of the country in 1945 and the

economic dislocation in the wake of the Korean conflict. The Korean authorities sent expert teams to Taiwan to study the techniques used by the Taiwan authorities and their results and to suggest possible measures in the light of their investigations, Suk Kim (1965:243-9).

Thus, long before the implementation of the interest rate reforms in September 1965 there was official recognition in Korea of the desirability of a bold and purposive interest rate policy. The phase of hyperinflation lasted until 1951-53. But even thereafter attempts to check inflation met with only limited results: despite substantial foreign aid, the growing requirements of defence and economic reconstruction aggravated the inflationary pressures. During 1953-63 the annual rate of increase in money supply and wholesale prices averaged 38 per cent and 21 per cent, respectively. It was not until late in 1963 with the election of a new government that the authorities were able to initiate a resolute and anti-inflationary programme, which in its initial stages was concerned primarily with restraining monetary expansion and with extending the role of the price mechanism as a means of achieving a more efficient allocation of resources. For many years, the Korean authorities had maintained statutory ceilings on interest rates that were substantially below free market interest rates and doubtless did not reflect the real economic cost of capital. One major effect of the unrealistic levels of interest rate was that "time and savings deposits of bank did not increase at all in real terms between December 1962 and September 1965 (before the interest rate reform) despite strong savings campaigns carried out by both government and financial institutions," according to Suk Kim. Consequently, there was

a drain of funds from the organised to the unorganised sector, which, going by estimates financed one-third of total outstanding loans in Korea.

Apart from their unrealistic levels, the structure of interest rates in the organised sector suffered from an excessively complex and artificial differentiation of deposits by categories, maturities, and rates. There were about 11 classes of deposits with rates ranging from 0 to 1.8 per cent on 'money' accounts and from 3.6 per cent to 16.8 per cent on savings accounts. It has been said that "so fine a distinction between accounts implies a knowledge by banking officials about the public's elasticities of demand for deposits of different maturity, with slight differences also in some other characteristics, that must be fictitious". Thus, the situation clearly pointed to the need for raising interest rates to more realistic levels while simplifying their complex structure, according to Gurley et al (1965:6).

The Korean authorities announced a far-reaching scheme of interest rate reforms in September 1965, according to Bank of Korea *Monthly Statistical Review.* Its objectives were to raise deposit and loan rates to realistic levels to reflect the true economic cost of capital; to increase voluntarily private monetary savings by providing adequately attractive 'real' rates of return; to promote optimum allocation of savings in productive channels to facilitate the shift in credit policy from specific and direct controls to global instruments; to attract funds from the unorganised sector (curb market) into the banking system, thereby extending and strengthening the area of effectiveness of the monetary authorities; to encourage the use of equity capital instead of borrowed capital by

industrial and commercial firms; and to reduce the degree of 'gearing' in the capital structure.

The Bank of Korea announced an increase in the rates on its loans and discounts, with effect from November 16, 1965, raising its basic rate from 10.5 per cent to 21 per cent. Alongside these measures, the monetary Board dismantled the extensive system of direct quantitative credit controls by abolishing, on September 30, the loan ceilings for individual banks and on specified uses of funds. Likewise, it abolished the 'penalty' interest on central bank loans to banks that had exceeded their loan ceilings.

The actual ceiling rate on bank deposits was set at 2.5 per cent a month, which was a little higher than the average yield on the government bonds (1.9-2 per cent a month) in the preceding few years but about one-half of the rate prevailing in the unorganised sector (4-5 per cent a month), following Taiwan's successful experience in this matter. As to loan rates, the authorities also adopted a pragmatic approach, in the absence of information on the interest elasticity of credit demand, in their search for a maximum rate that would not inhibit private investment. In the light of studies of the cost structure of various industries, it was estimated that the average cost of interest to industries would not increase if loan rates were set about 26 per cent per annum, on the basis that if borrowing from the unorganised sector was reduced because of the increased availability of bank credit at such a rate the incidence of increase in the average interest rate would remain largely unaffected and perhaps even be reduced in the long run. These studies also suggested the average rate of return on

industrial capital to be about 20 per cent in real terms, Shaw (1967:249-78).

Assuming that there would be an annual price rise of 7-10 per cent, an average loan rate of 26 per cent was regarded as reasonable, with a higher rate of 36.5 per cent from overdue loans to discourage the use of extended overdrawn positions to profit from the differential between the deposit and loan rates.

The sharp, dramatic increases in deposit and loan rates (see Table 2-14), in addition to the announced objectives, were intended to demonstrate clearly the determination of the authorities to curb inflation. Thus, the standard loan rate of banking institutions was almost doubled, increasing from 14 per cent per annum to 26 per cent. In terms of annual interest the rise in the maximum interest on the one-year deposit was more than doubled, from 15 per cent to 34.5 per cent. It is significant that the rates on long-term deposits were set on a monthly basis in accordance with the practice in the unorganised markets. This gave the depositors the option of either withdrawing the interest earned at the end of each month or accumulating it to have it compounded monthly. This feature was intended to give a sharper edge to the organised banking sector's competition with the unorganised sector. Since the rates prescribed were intended as legal maxima, this meant that within the ceiling rate(s) each bank was free to fix its deposit rates by term structure and its loan rates by purpose, security, etc. In fact, however, all banks adopted uniform deposit and loan rates by an agreement of the Korean Bankers Association, mainly to avoid uneconomic interbank connection. Most banks increased the agreed

accrual rates to the maximum that was permitted under the law of September 30, 1965.

The lower rate on loans from government funds was considered justifiable for attracting private investment in selected essential sectors. Another consideration was that the rate on long-term loans (of ten years and above) should be geared to long-term expectations on interest, since unilateral changes in long-term loan contracts between banks and customers were considered neither feasible nor desirable. This second consideration indicated that the high interest rate strategy was regarded essentially as a transitory programme to cope with low monetary saving under inflationary conditions and that, with the attainment of a relatively stable price level, interest rates would decline to relatively normal levels.

The standard loan rate also did not apply to government approved borrowing, whether private or official from foreign sources. This, in a climate of domestic credit restriction, coupled with the relative stability of the exchange rate since 1966 and the greatly reduced exchange risks, naturally led to a large expansion in foreign borrowings.

When allowance was made for these preferential rates and the exemption of foreign loans from the purview of the enhanced loan rates, the weighted average lending rate of commercial banks was estimated to be about 18-20 per cent. Likewise, the average money cost of borrowing for businessmen was reduced to levels far below the standard loan rate of banks, and the real cost too was further reduced with the continued increase in prices. Thus, approximately one-third of total commercial bank credit was extended at preferential rates (mostly to the export market).

In order to counter the rise in commercial bank credit after September 30, the basic rediscount rate of the Bank of Korea was raised on December 1, 1965, from 21 per cent to 28 per cent, which probably represents the highest central bank rate ever.

The effectiveness of the high interest rate structure in October 1965 in stimulating savings is shown by the spectacular rise in monetary saving in 1966 (123 per cent) and 1967 (84 per cent). It is significant that even the lowering of interest rates on deposits in April and October 1968 did not affect the growth of monetary savings, which increased by 94 per cent in 1968. The increase in time deposits was at a higher rate than in other types of saving because of the more favourable rate, and also because some categories of savings deposit such as instalment savings, could not be accelerated in the short run. The rise in quasi-money was indeed impressive, even though a part of the increase reflects the accrued interest that was withdrawable on demand. On the other hand, some of the rise in time deposits might represent merely a diversion of deposits previously held with nonbank moneylenders (the unorganised sector).

The bulk of the increase in time and savings deposits during 1964-68 was accounted for by the household sector (see Table 15). The presumption of interest sensitivity of household savings is also borne out by the results in a multiple regression analysis, which showed a strong correlation between the real deposit rate of interest and the savings of the household sector as well as between gross private savings and gross domestic savings, according to Suk Kim's study.

The regression equation used by Suk Kim is as follows:

$$Sm = -124.36 + 0.21Y + 1.10\ (R - \Delta P_2)$$
$$(0.03)\quad(0.37)$$

$R_2 = 0.9363,\ S_y = 12.08$

Where Sm = money saving (constant billion won)

R = nominal maximum deposit rate

ΔP_2 = annual percentage change in the two-year

saving average of national wholesale price index.

On the other hand, the behaviour of aggregate private savings (i.e. private savings as a percentage of GNP at current prices) was somewhat erratic (see the last column of Table 16) over the period 1962-68. On the whole, it may be conceded that the policy of realistic interest rates has improved the efficacy of the price mechanism in the organised money market in Korea. There are, however, no data to indicate its precise impact on the share of the inorganised sector in total finance. On the other hand, the high interest rates on domestically borrowed funds have also encouraged excessive borrowing from abroad. Since such borrowing requires the approval of government departments and specialised financial institutions, it has in effect created a system of administrative credit rationing. Equally, to some extent, the high rates have doubtless also stimulated an inflow of remittances from abroad. This only highlights some of the problems of an active interest rate policy in a comparatively open society.

While the interest rate policy in Korea has been notably successful in achieving its objectives, some of the concomitant factors that contributed to the result cannot be overlooked in an overall assessment. First, the achievement of overall balance in the government budget virtually eliminated the need for domestic borrowing, except for temporary

accommodation from the Bank of Korea. Consequently, the need to keep down the cost of government borrowing ceased to be an inhibiting factor in raising interest rates. Second, the comparatively small ratio of financial assets to total national wealth meant the capital losses, as a result of interest rate increases, were not a material consideration. Third, because as in Taiwan, government and semi-government institutions account for a substantial part of commercial banking, the implementation of the reforms was that much easier. Other contributory factors included the active savings campaign of the Government, the lack of alternative financial assets to bank deposits offering comparably attractive rates, and the exemptions of deposit interest from income tax. Thus, interest rate policy, although important, was only one element in the overall stabilization programme, which comprised appropriate budgetary, credit and exchange policies.

The interest rate reform of September 1965 is, in retrospect, best viewed not as a one-for-all, high interest rate strategy but as an avowedly transitional phase, since the authorities have steadily endeavoured to normalize the interest rate level and structure by progressively reducing and simplifying the general level of rates with the restoration of financial stability. The attainment of price stability has, however, ensured the maintenance of positive real rates of interest.

2.18.5 A Conventional Interest Rate Policy: Malaysia and Singapore

In contrast to the high interest rate strategies in Taiwan and Korea, the experience of high and rising levels of monetary savings in Malaysia and

Singapore, despite low and stable nominal interest rates, is equally instructive – not least because of some other distinguishing features of these economies.

The fact that both Malaysia and Singapore have been able increasingly to adopt an autonomous interest rate policy on their treasury bills, in contrast to the earlier tendency to follow the UK treasury bill rate, shows the openness of an economy need not be a constraint on an autonomous policy geared to local needs. The development of increasingly active local treasury bill markets has created a convenient outlet for short-term banking funds that were formally invested in UK treasury bills.

The structure and level of deposit and loan rates of interest in Malaysia and Singapore (Table 2-17) as well as the nominal rates on government securities (up to 6.5 per cent), are of a comparatively low and stable character in contrast to those of Taiwan and Korea. They therefore represent a more conventional pattern of interest rates commonly found in economies that have not experienced violent economic fluctuations. Thus, apart from the fine and fairly frequent variations in the treasury bill rate, other rates have been remarkably stable over long periods. The explanation for this may be sought in the fact that the volume of monetary savings in both countries has risen impressively despite the low and stable interest rates. This reflects in large part the confidence of the average investor in the ability of the value of monetary assets that has resulted from his experience with prolonged stability of consumer prices, which in turn is due to a variety of factors, such as the openness of the economies and the appropriateness of financial and wage policies. The depositor therefore has been able to earn a real rate of interest at least equal to the money rate and

in some years even higher than that, owing to the fall in prices. Significantly, deposits have maintained their rise even in years when the real rate was negative.

More or less similar considerations apply to the pattern on interest rates on government securities because of the positive real rates of interest on them. Because about 80 per cent of the total marketable public debt is held by tax-exempt 'captive' funds (required by law to be invested in government securities), such as the Employers Provident Fund and other trust funds and the Post Office Savings Bank, the Government is assured of progressively rising support from investors even at stable interest rates. In view of this, paying higher interest on funds that would flow into gilt-edged stock would add needlessly to the cost of debt service. Although the debt service burden is not a decisive argument against higher (realistic) interest rates on government loans, at least two possible considerations might argue against excessive rigidity of existing yields on government securities. The first is the 'equity' argument that the Government should not unduly exploit its monopolistic position as a borrower. Moreover, pension and social security funds in many countries are increasingly diversifying their portfolios by investing in high-yield, first-class equities to offset the low nominal yields, as well as depreciation in real terms, of gilt-edged stock. Consequently, the availability of a large and growing captive market in Malaysia and Singapore in itself need not preclude examination of the adequacy and equity of the real rate of return to the investor in government securities, even though this has been positive in the past years. These considerations are, of course, equally applicable to other developing economies.

Another argument for an increase in interest rates on government securities could be its possible efficacy in attracting noninstitutional (i.e. personal) savings. This is an unexceptionable objective, but its feasibility is problematic. In Malaysia and Singapore, as elsewhere, the trend is toward a progressively greater 'institutionalization' in the ownership of public debt, and it is arguable whether personal savings (for which there is a wide range of competing assets, such as debentures, equities, consumer durables, real estate or more simply ploughing back into family business) would be induced into gilt-edged stock to any great extent merely through an increase in interest rates. A complementary approach might be to tap noninstitutional savings through means other than a rise in the interest rates, say through variety in their terms, forms, and maturities, improved institutional facilities, sales promotion, etc.

On the whole, the experience of Malaysia and Singapore shows that price stability is in itself a major factor in sustaining an ideal climate for encouraging financial savings, and to that extent the role of interest rates in an overall savings strategy has been correspondingly less important than in other countries.

2.18.6 Some Implications of an Active Interest Rate Policy

The foregoing analysis suggests that, the chance is not as much between particular levels or structures of interest rates as between rigid and flexible policies; second, in the absence of any universally valid *a priori* criteria, interest rate policies have to be determined in terms of a judicious empiricism as part of an overall savings and development strategy, with

perhaps a little more accent on the role of interest rates as a savings incentive than heretofore.

Paradoxically, some institutional features of the less development countries create an even more favourable environment for positive interest rate policies than in the developed countries. Thus, the comparatively low ratio of financial assets to total assets minimizes problems of capital loss to holders of such assets, and even where a considerable volume of transferable, income-yielding financial assets (other than bank deposits) exists, most of these assets are held until maturity. Consequently, interest rates can be raised more often without excessive regard for protecting the balance sheet position of financial institutions. The comparatively small range of financial assets also minimizes the risk of 'switching' from one asset to another without any net inflow of savings. Likewise, the comparatively low ratio of public debt to national income and of the burden of debt service to government revenues implies that the justification for low interest rates to reduce the cost of government borrowing loses much of its force. On the other hand, the greater 'skewness' of income distribution in the less developed countries could also suggest that higher rates on government securities might favour the higher-income groups. But the redistributive efforts of interest rate changes can be mitigated by effective taxation of interest income as well as by subsidizing (i.e. higher) interest payments on nonmarketable debt (i.e. small savings).

2.18.7 Appropriateness of rates on government borrowing

Concurrently, rates on government borrowing will need to be kept constantly under review, so that the level and structure of interest rates ensure the optimum allocation of resources between the public and private sectors. The very enjoyment of monopolistic borrowing powers makes it all the more incumbent on governments in the less developed countries to borrow at more competitive rates in keeping with the real cost of capital in the economy, rather than to continue to borrow at artificially low rates in the organised sector. Neither the capacity of governments to borrow at low rates nor the existence of a captive market for private savings can be regarded as a decisive argument against more realistic interest rates. To continue to offer unattractive interest rates to one class of savers, when effective rates in the rest of the economy are much higher, amounts to subsidizing one category of borrowers (public sector) merely because the lenders (private savers) have no alternative. But this argument is based not merely on grounds of equity to the saver but even more importantly on criteria of economic efficiency in allocating scarce investible funds which are clearly vitiated by permitting excessive diversion of funds to the public sector through the captive market. To the extent that these conditions prevail, the economic rationale of low and stable rates on government borrowing in some of the less developed countries is not well founded, since it disregards the opportunity cost of public borrowing and investment. This issue is of vital importance for developing countries, as the organised sector (public and private), although small in relation to the total economy, accounts for the major share of new investment under development plans.

Admittedly, in both Taiwan and Korea interest rate reforms were only one of the elements in the stabilization programme, since there were other and perhaps more significant contributory factors, such as exchange reforms, appropriate monetary and fiscal policies, and foreign aid. Nevertheless, their contribution to the success of the programmes was certainly substantial, even allowing for the limitations of the evidence and the fact that the use of extremely high money rates of interest in both countries occurred under very special circumstances of high and rising inflation, which both justified the use of and brought success to the interest rate policies implemented. The experience of Taiwan and Korea has, however, many pertinent lessons for other less developed countries, not least because these countries also rank high in the 'growth league' as well as in terms of export performance. Above all, it suggests that there is a critical range within which monetary savings may respond, positively to increases in interest rates. It underscores both the desirability and feasibility of maintaining realistic interest rates on monetary savings, which also helps to improve the climate for aggregate real savings and thereby to promote stability as well as development. Equally, the fact that policies in both countries have been sufficiently flexible to lower interest rates with progressive increase in monetary savings also implies that the emphasis in developing countries should be on realistic and flexible interest rates rather than on stable average rates, whether high or low, and that there are risks in a 'ratchet-like' interest rate structure, according to Schackle (1965:151).

Perhaps the greatest barriers to realistic rates of interest are the tendency to concentrate on the money rate rather than the real rate of return and the psychological resistance to raising nominal rate to very high levels. But,

equally, countries like Malaysia and Singapore, which have enjoyed a relatively high degree of price stability, have been able thereby to ensure an adequate positive rate of return to savers. Such a rate of return can therefore be achieved either through manipulation of nominal interest rates or through stable prices. The contrasting experience of Taiwan and Korea, on the one hand, and of Malaysia and Singapore, on the other hand, is a salutary reminder of the dangers of dogmatic generalizations on interest rate policies that will need to be tailored to specific situations in conjunction with appropriate price and income policies. One cannot therefore conceive of any purely monistic objective of regulating interest rates. An appropriate overall interest rate policy has been stipulated for a less developed country by Shackle. That: "it will have to be based on a delicate balancing of rates realistic enough to stimulate saving but not so high as to inhibit investment in desired channels, a task that will tax the resources of economic management in the less developed countries, considering that interest rate is the most paradoxical of all economic quantities".

2.18.8   Market Economy Dilemma

In his *Zero Sum Society,* Lester Thurow, a former professor at Massachussets Institute of Technology and a writer for *Newsweek* Magazine has attempted to clarify the market economy's dilemma. According to Thurow, most of governments' tinkering has rested on two assumptions. That (i) economic growth was not only possible but virtually unavoidable and (ii) government could therefore improve the lot of certain groups in the society without seriously damaging the well-being of others through such issues as financial repression and so on. Thurow then

proclaims that the falsity of these assumptions is now obvious. With the economic pie not growing in size, a large slice for one group means a smaller slice for another. For instance, environmental and consumer gains came at the cost of business profits. Business price increases to offset these costs and simply redistribute the environmental burden back over the population. While this may seem fair enough, Thurow points out that the economy is a vast collection of many interest groups, each seeking to use government in one way or another to protect itself.

Thurow however, does not throw his hands up in despair. The market solution, he contends, lies in recognition that all macroeconomic problems are basically distributional problems (who gets what size slice) and therefore in developing a comprehensive economic policy that provides for a rational distribution of income. The government must remain firmly in the driver's seat such that practical policy problems of the interest rate become grist to the mill of economic analysis.

2.19   FLAWS IN SAVINGS MOBILISATION

Financial intermediation is the primary duty of banks. A bank is expected to always look for opportunity to intermediate, or mobilise funds from people with more money than they need now, to people who need more money than they have now. A critical aspect of this task is interest rate. To attract funds from the surplus spending unit, banks pay deposit interest rate and before they give out funds as loans. At every point in time, each bank tries to offer deposit rate that is attractive enough to make those who have money to save rather than spend.

The deposit rate must also be competitive enough to encourage depositors to patronise that bank instead of other banks. This notwithstanding, the deposit rate offered by any bank is expected to be in consonance with the average deposit rate in the industry. In other words, while deposit rate is expected to differ from bank to bank, the difference is however, expected to be minimal when compared with industry average. In some cases, especially as revealed by deposit and lending rate of banks published by the Money Market Association of Nigeria (MMAN), the difference rarely goes beyond two percent. It is in exceptional cases that the differences exceed three percent.

In other words, if the average deposit rate in the industry is 15 percent, the highest offered by any bank would be 17 percent and the lowest 13 percent. The same thing applies to lending rate. Hence, it is abnormal for a bank to offer interest rate especially deposit rate far beyond industry average. This might happen for two reasons. Either the bank has more than enough deposit hence, trying to discourage depositors from bringing more to it, a very rare occurrence, or the bank is having liquidity problem and is trying to mobilise funds at all costs.

The latter case is a sign that something is wrong with the bank, it means the bank is sick. In banking parlance, a bank that is mobilising funds at well above industry average interest rate is said to be engaged in "Distress Borrowing", and is another way of saying the bank is distressed. It may be that the bank has lent out more money than necessary and doesn't have enough to meet its obligations to customers, or most of its loans are not performing, those who borrowed money from it are not repaying as at when due. It is in this light that, particularly the year 2008, aggregate

deposit mobilisation by some banks and accompanying "interest rate war" become worrisome and disturbing.

This is because since the banking consideration exercise was concluded, the Central Bank of Nigeria (CBN) was always telling the banking public that the banks are sound and safe than ever before. In fact, it is difficult to doubt this especially in view of the huge amount of fresh capital raised by the banks and the triple digit increase they have been recording in profitability. That is besides the rapid increase in banks' branches across the country and massive rollout of consumer finance products.

Yet, the interest rate war is a sure signal that something is still fundamentally wrong somewhere in the banking industry. At a time when the highest deposit rate one could get in the industry is 15 per cent, a bank started offering 20 per cent, and all of a sudden, other banks began to jack up their deposit rate as well as their lending rate. Now, why should a bank that is sound, well capitalised and declaring hefty profit begin to offer deposit rate well above industry average, all in a bid to attract deposit?

May be the bank is not distressed and is sound, but just want to ensure it has enough deposit in its books by the end of its operating year, to declare it is the largest bank in the country. For whatever reason, whether for competition or for liquidity, it is a signal that something is wrong somewhere.

If these depositors had sat down to compare what the banks offered them with that of other banks, may be they won't have lost their money. So whenever a depositor is offered an unusually high deposit rate by any bank, irrespective of whether the bank claims to be the largest in the

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country or not, he or she should be suspicious and act with caution because banks are never, without a cogent reason, generous with interest rate

The global financial crisis – though somehow abating, has been hitting hard on world economies, with the banking sector at the receiving end. In Nigeria, the negative impact on the banking sector has been colossal with about 5 trillion naira in bank equities reportedly lost as at July 27, 2009 in the stock market, according to Akerele (2009:27).

The CBN at that time rose to the challenge by putting in place measures (short-to-long-term) to combat the menace and protect the banks from crisis. These measures range from liquidity management to forex management and tightening of regulation and supervision framework. The measures also include interest rate management and confidence building. Another measure is the setting up of the Asset Management Corporation of Nigeria (AMCON) to put the nation close to a final resolution of the banking crisis and the repair of bank's balance sheets. AMCON is the principal vehicle for resolution of the solvency of asset quality problems that have risked the banking system in crisis era. It provides an alternative to the liquidation of distressed banks. In addition to purchasing non-performing loans from banks, AMCON is a vehicle for recapitalizing these institutions. It also holds the promise of reducing the debt overhang on capital market operators, thus giving the much needed stimulus to not only the capital market but also the banking industry.

2.20　　　WHY AND HOW BANKS GOT INTO MESS

Three years or so into the Structural Adjustment Programme (SAP), that being in early 90s, there was a push by industrialists and businessmen for

the deregulation of the economy including the banking industry. The government liberalised the banking sector and consequently many of the banks were incorporated. This gave rise to the acute shortage of qualified and experienced personnel, such that ethics and professionalism where thrown overboard. Paternalism and god-fatherism became the basis for employment to the detriment of professional qualification and experience. Most of the personnel at the commanding heights of the banking industry were unqualified and had to cover their deficiencies by advertising products and wares they never had. Unprofessional competition crept in and the race began as to who will outdo each other consequently, the era of 'selflaceration' in banking set in and we are yet to recover from the effect.

The financial statements published by the banks for accounting periods shows that profits and other bottom-line indicators decline when compared with preceding periods. Many investors and others do not trust the figures published by auditors because conflicts of interest remain in all audits even where consulting links are abolished. At a time banks published three financial statements – one for the apex bank, the CBN, one for the Securities and Exchange Commission (SEC), and one for own use. Most banks in Nigeria in addition to audit functions give to the same accounting firms consulting jobs in the bank. It is very difficult for such audit firms to do a thorough job. Even where they appear to have done a good job, they still in the process of the consulting assignments "drum" up other jobs in order to keep themselves in business. Most of the time, the jobs assigned to them may not be accounting functions but purely operational issues which the audit firm is ill-equipped to perform. There are very serious concerns that the auditors are looking for jobs in the companies they work

for. It is necessary for corporate boards to look closely at the assignments before giving them to the company's auditors. Moreover, the auditors are under pressure to keep their jobs in order to get the audit business for the following year. Based on this expectation, they are willing to compromise their independence and carry out their assignments to satisfy the "master". It should also be noted that globalisation and e-commerce are making reliable audits extremely difficult. The saga of most of the liquidated banks can be traced to faulty auditing based on obeying the master's wishes. The need to bar auditors from selling their tax advice and other services to accounting clients should be considered as being very essential if serious corporate reform is to be achieved. The bodies regulating accounting practice should regard this as a challenge to consider this in order to avoid ethical conflicts.

The collapse of Enron Corporation, WorldCom Incorporated, Adephia Communications Company, Global Crossing Limited and Tyco International Limited (though U.S. companies) are cases in point where the auditors have been fingered as giving false information on corporate performance. The collapse of one of the five accounting giant firms, Arthur Anderson was due to fraudulent accounting. These cases should lead to a re-examination of standards of auditing.

From the above, it is apparent that stakeholders, investors and even shareholders have no faith in the audited figures published by the banks especially in a corrupt society such as ours. It must be remembered that bank performance in terms of the bottom-line depends on the trust and confidence reposed in the bank by its customers. Trust and confidence take years to win and just hours to lose.

Therefore, the organisation's system of corporate governance must win the trust and confidence of the investors, customers and the international community. The steps necessary to rebuilding trust and confidence in the corporation are as follows:-

- Transparent, i.e. being totally open, going beyond current requirements or expectations.
- Responsible – clearly acting in the broader and longer term interests of all.
- Uncompromising – total commitment to highest moral positions
- Successful – achieving great results by combining excellence in all areas with strong values, and
- Temperate, i.e. taking care to avoid major risks, wild decisions and extravagance.

Good corporate performance depends on the Chief Executive Officer (CEO) who is expected to implement board policies for the purposes of achieving corporate goals within the limits set by law. The conflict of interest of the CEO must be addressed so that superior performance will not be hindered.

The board should not make decisions that will benefit the CEO at the expense of the future of the company. The remuneration and incentive package of the CEO should not be hidden. Operating staff face very serious accountability conflicts that affect performance. The scandals and fiascoes that have come to the fore in investigating the activities of middle management staff is the syndrome of "I did what I was told". This syndrome has given rise to many questions. Who do you serve? Your

boss? The boss of the boss? The CEO? The Board? The shareholders? Customer interests? General public? Courts of Law? Your own conscience? Your job or your career, which do you prefer? There is extreme pressure on employees to toe the official line as well as harassment and threats from people representing huge powers.

The electronic and print media have been in the forefront of corporate performance and survival in several positive ways - one is to inform the public of the company's activities and profile; second, is x-raying the activities of the board and management. Media activities and investigation should be a very powerful corrective force, exposing the wrong – doings of companies. For other extraneous reasons and self-interest, the media may be compromised. This is because the media depends on advertising for survival. There is also the fear and danger of alienating big funders of media organisations. The media is also sensitive to news manipulation and lobbying, including benefits for journalists writing stories. There is therefore, the need for transparency, that is, declaring interest of journalists and editorial team including those of the owners.

Consultants and advisers are a different genre but could be compromised particularly where they also double as the auditors of the company. Who is the consultant or adviser accountable to if things are discovered? Is it to the individual who set up the arrangement and is asking for the advice (who may be part of the problem)? His or her boss? The CEO? The board? The shareholders? The government? Consumers? The public? Who does the consultant tell and when? What are the limits of confidentiality in consultancy? In some cases, consultants report on the basis of what the CEO or the Chairman of the board expects in order to remain in the good

books of their "master", thereby sacrificing professionalism. This impedes the performance of the company.

Government functionaries can also be compromised in the performance of their duties by turning a blind eye to corporate malpractices. We have heard, though not confirmed, that banks have bought cars or houses for some government functionaries in order to win the deposit of the government body. The banks spend a lot of money to lobby government agencies and, in fact, have a member of their staff permanently stationed to lobby members of the national assembly for their selfish interest. They may succeed temporarily to boost bottom-line performance but in the long-run, the bank may run into problems that may adversely affect its performance. A lot of money is spent lobbying and this is with the aim of influencing the assembly to create new laws or regulations, change existing laws, limit corporate liability, create barriers to entry for competitors and influence who gets elected by large contributions. All these have the potential for corrupting the democratic purpose, there is the obvious risk of corruption and the danger of distorting free market. When the corporations offend the law, the government usually will take legal actions against them and of course, the large corporations or banks have more resources compared with the legal budgets for government lawyers. Moreover, the banks often get better quality representations from well-known heavy Senior Advocates of Nigeria (SAN) and this is at a cost that will affect corporate performance and a drain on the resources of the bank.

The theory of "Success Plus" means doing great things for the bank in the right way. Success will be redefined and there should be a fundamental shift and rethink about the objectives and purpose of the bank. Corporate

responsibility will be far more widely interpreted. Real success will be everything we have previously taken for granted in high performing companies plus the highest ethical standards in all areas. The core values and universal slogan for corporations will be "building a better world". Corporations, I mean banks, will be expected in future to "build a better future", not only for their customers or workers but also business partners, community, nation and wider world. These with effective corporate governance based on this core value will have an added competitive advantage, attracting and retaining talent and generating positive reactions in the market place.

We have been able to trace the various ways some of the stakeholders can be compromised by bank boards and management and how these activities inhibit or prevent corporate performance. The state of health of the financial institutions in recent times gives cause for concern and there is the need to improve the risk-management process in banks. Increasingly, the entire risk-management process has become more quantitative, reflecting not only the enhanced ability to collect and process data but also improved techniques for measuring and managing risk. Bank regulators are working to develop a more modern international approach to bank capital – called Basel II. Although these standards, in the first instance, are being designed to address the changing practices at large, we expect the lessons learned about risk management to have much broader effects.

Recent abuses of corporate accounting practices and other matters provide good lessons in risk management as bankers try to increase earnings by cross-selling more products. We have seen how conflicts of interest and the lack of a strong quality-assurance function destroyed the reputation

and viability of a major accounting firm. Similarly, banks that compensate line officers on the basis of sales and cross-selling (target selling) must guard against the adverse incentives that those compensation structures can provide. There, too, a strong quality assurance function is essential. Given the dominant role of credit risk at banks, the chief credit officer should ensure that pressures in increase fee income do not lead to unacceptable levels of credit risk.

Sound corporate governance is an essential element of a strong risk management process. As bankers or financial consultants, there are the specific responsibilities to manage the risks in the banks and financial institutions very well in order to effectively oversee the systems of internal controls. Bank directors are not expected to understand every nuance of banking or to oversee each transaction. They can look to management for that. They do, however, have the responsibility to set the tone regarding the bank's risk-taking and to oversee the internal control processes so that they can reasonably expect that their directions will be followed. They also have the responsibility to hire individuals who they believe have integrity and can exercise a high level of judgement and competence. Directors have further responsibility to periodically consider whether their initial assessment of management's integrity remains correct.

Our laws and regulations hold board of directors responsible for ensuring that their banks have an effective audit process and internal controls that are adequate for the nature and scope of their businesses. The reporting lines of the internal audit function should be such that the information that directors receive is impartial and unduly influenced by management. There have been cases where CBN supervision reports sent to the chairman of

the bank was received by the CEO and was hidden from the chairman, it was only discovered when the burble burst.

Internal audit is a key element of management's responsibility to validate the strength of a bank's internal controls. In the limited cases in which the function must be outsourced, the best practise is to avoid using the same firm for external audit.

Internal controls are the responsibility of line management. Line managers must determine the level of risk they need to get their banks involved and must assure them that the combination of earnings, capital and internal controls are sufficient to compensate for the risk exposures. Supporting functions such as accounting, internal audit, risk management, credit review, compliance and legal, should independently monitor the control processes to ensure that they are effective and that risks are measured appropriately. The results of these independent reviews should be routinely reported to executive management and boards of directors. Both executive management and directors should be sufficiently engaged in the process to determine whether these reviews are in fact independent of the operating areas under review and whether the officers conducting the reviews can, indeed, speak freely. We are of the opinion that this is very difficult to achieve or enforce in our system when those that are supposed to check these reviews are themselves compromised before they review the reports. The level of independence from executive management that a board can demonstrate has, of course, become the more visible and more important factor in evaluating corporate governance and bank performance. Recent audit failures in our country and other countries have highlighted the value of sound practices such as having audit committee

members regularly meet privately with a bank's outside auditors to discuss matters without management being present. The level of the understanding and exposure of the members of the audit committee in banks and other companies is suspect as their appointment or election is not transparent and we do not believe they can ask the right questions. It is our believe that Nigerian banks and companies should review and examine the mistakes made in other countries and ensure that these mistakes are not repeated.

The Sarbanes-Oxley Act in the USA took the matter of independence a step further, in the case of publicity traded firm, by incorporating specific requirements of independence into law. For example, all members of a company's audit committee must now be outside directors. Moreover, at least one of those committee members should be a "so-called" financial expert. If not, the firm must disclose why not. The legislation also assigns audit committees sole and direct responsibility of appointing, compensating and overseeing the company's auditors. We believe this minimum can be practiced in Nigeria. Other provisions of the Act set clearly potentially broad ranging standards affecting the way public companies compensate their executives and directors and disclose their operating results to strengthen the role of outside auditors. The Act also limits the non-audit work such firms may perform for audit customers and creates an oversight board to regulate and oversee audit work. Although the Act applies only to institutions that register their shares with the U.S. Securities and Exchange Commission; its elements should be considered by virtually all commercial banks and by most other companies of any

material size. They could highlight weaknesses in virtually any organisation's procedures.

Indeed, beyond legal requirements, boards of directors and managers of all firms should periodically state where they stand on ethical business practices. They should ask for example, "Are we getting by on technicalities, adhering to the letter but not the spirit of the law? Are we compensating ourselves and others on the basis of contribution, or are we taking advantage of our positions?" These issues need to be addressed by Nigerian companies particularly the issue of compensation packages of top managers that are shrouded in mystery. Monks (2009:81-9).

Uncertainty regarding the quality of corporate accounting standards strikes at the heart of our capitalist system and threatens the efficiency of our markets. Investors and lenders must be confident that they understand the risks they accept and that their counter-parties are playing fair, informed and objective professionals can legitimately disagree on the best accounting standard to apply to new types of transactions. That is part of the challenge of keeping accounting standards current. The rapid pace of business innovations makes it impractical to have rules in place to anticipate every business transaction. Rather, the more complex and dynamic the business world become, the more important it is that accounting be based on strong principles that are sufficiently robust to provide the framework for proper accounting of new types of transaction.

Rules alone, however, do not ensure good financial reporting. At Enron and other companies, weak corporate governance practices apparently permitted sham transactions and misleading financial reporting. Outside

auditors erred in trying too hard to please an "important" client. They forgot that their professional role is to assure users of financial reports that the statements fairly represent the condition of the corporation and that they communicate, not conceal, the level of risk. Having new rules do not provide the solution, what we need most is to restore that integrity of corporate accountants and the quality of the audit process rather than impose new rules. One reason that accounting in the U.S. (may be also in Nigeria) has become rule-based is that we intend to add new accounting standards once abuses or infringement occur even when the abuses resulted from accounting and audit failures.

Each business line in a complex organisation or bank is unique, and to be most effective, the specific disclosures of its risks should be different. Even in smaller organisations, disclosures should be tailored to reflect the activities of the organisation.

A summary of the information that is important for executive management and the board of directors in monitoring the health of the bank is an excellent place to start to tailor the information that would be useful to investors and customers. This is the approach being taken in developing the Basel II Capital Account: Disclosure of rules that are too rigid may be, or become incompatible with risk management processes that continually evolve. In this area and many others, the best performance results are likely to come from bankers and regulators working together.

2.20.1   Imperative of Holistic Approach

Investors, market regulators, and market participants have learnt many lessons over time about the relationships and interconnected nature of

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financial markets across the world. The near collapse of the global financial markets and the ripple effects that reverberated across our markets remain one of the burdens that investors are continuing to come to grips with.

The failure and inability of Nigerian market regulatory authorities – the Central Bank of Nigeria (CBN), the National Deposit Insurance Corporation (NDIC), and the Securities and Exchange Commission (SEC) to effectively respond to the ensuing market downturns and provide sufficient firewalls against losses in our financial markets add lasting lessons to our market realities.

The global convergence of business and information aided by the extensive revolutions in technology have exposed the inadequacies of markets that rely on obsolete approaches to regulation and have created fluid market situations where official regulatory inadequacies in far away markets inflict lasting pains in local markets.

Central to these lessons is the need to identify, monitor and reduce the possibility that a sudden shock will lead to a market seizure or cascade of failures that puts the entire financial market systems at risk of collapse or near collapse. Other lessons include the inability of market regulators to move at the same pace that markets move and adjust and adapt to technological innovations at the same pace as other market participants.

Efficient free markets remain the most viable avenue for increasing our national wealth. It guarantees continued employment, innovative businesses, and brings out the best in human ingenuity by encouraging those with the best ideas to approach the market for funding opportunities.

There is a role for regulators, investors and market participants in an efficient free market.

The most lasting lesson to be learnt from the first global market crisis of the 21st century is the inadequacies of existing economic and market theories and the inabilities of regulatory authorities to effectively engage the market at the same pace in an increasingly interconnected global market. These lessons will naturally lead to the establishment of enhanced market regulatory mechanisms both at individual, sovereign and international levels because sovereign markets have national interests in protecting the continued survival of local markets.

At regional and international levels, the drive for effective policing of markets is borne out of the need to protect and avoid the effects of local market failures cascading into a global problem. China for example, has intensified its call for re-addressing the supremacy of the US Dollar as a prime global currency.

Nigerian investors and the Nigerian economy as part of the West African and African regional economies require effective regulation as part of the determined efforts to enhance economic growth and sustain investors' confidence. Furthermore, market participants in Nigeria at its minimum require clarity of purpose and visions of predictability from our market regulators.

The primary interest of investors and shareholders are profits from invested capital and maintenance of value. Competition for investment funds from various markets creates constant re-evaluation of alternative

market avenues for investors. Stable and predictable market environments provide investors with assurances to engage in predictable market risks.

Regulators roles in the market are primarily to assure level of fair playing environments and to assist in attracting private investments that lend positive results to the national economy. No sovereign government has ever been successful at providing "full" employment alone. Successful economies are a combination of government and private partnership in investing for growth. It is the responsibility of market regulators to create the enabling environment for private investors to participate.

Inability to fashion out regimes of efficient market regulatory institutions are antithetical to economic growth and are the primary causes of market failures. When markets fail, both public and private invested capital loses value. Market failures further erode private participants' confidence and have negative impact on economic growth.

Several factors are regularly prescribed as causes of market failure. However, there is a near consensus among economists and market analysts that market failures in emerging economies, such as Nigeria are primarily a function of inefficient, ill-equipped and redundant regulatory institutions. Efficient emerging economies traditionally attract high inflows of private capital due to the availability of profit opportunities, infrastructures, service provisions, industries etc., and tend to command high attention and create opportunities in these economies more than those found in developed economies.

Regulating a market requires the adoption of best practices and the ability to learn and correct identified lapses and deficiencies, thereby limiting re-

occurrences. However, the most debilitating problem within the Nigerian market is the pervasive nature of corruption and the inability of both the legislative and executive arms of government to curb sharp and corrupt practices. The penetrating cloud of corruption imposes questionable clouds on the investment climate. It inhibits the emergence of viable institutions necessary for long term investments. Services or goods provided through the market to the Nigerian consumer come at exaggerated and grossly inefficient prices, compared to similar goods or services in more efficient markets. This is the case in telecommunications, electricity, banking and so on.

Efficient capital allocation as an investment principle, requires a long term approach. Efficient private capital allocation includes the ability to identify strategic long term investment interests and the potential returns. It is these long term investment interests that create lasting employment opportunities in every economy, a necessary component for any meaningful economic growth and market expansion.

Once long term private capital investment is crowded out, the economy is populated by short term investments, where investors seek quick or immediate return to their capital. Markets populated by short term capital investments are susceptible to every manipulation and gimmicks because the intent of the investor is to secure quick returns.

2.20.2 Conflict of Interest and Systemic Risk

Nigeria has one of the world's weakest conflict of interest laws in matters relating to the markets. Several market regulators are mired in self-dealings and insider dealings that present their work in the markets in the

most unfavourable light. The immediate past chairman of the Nigerian Stock Exchange (NSE) for example, was the Chairman and Director of Transnational Corporation (Transcorp), one of the giant companies that were lavishly promoted as Nigeria's response to perceived global conglomerates. The company came to the markets to seek equity with the Chairman of the NSE as its frontline cheer leader. The same goes for CBN Governors and Regulators, the Securities and Exchange Commission (SEC) e.t.c. These individuals take substantial equity interests in the companies they regulate whether directly or indirectly.

These acts overtime, penetrate investor confidence in the system and may have adverse effects on both the market and the company involved. They put to question every decision taken by the regulator and cast doubt on the sincerity of purpose. Alan Greenspan, the venerable former US Federal Reserve Bank (Central Bank) Chairman for more than a decade, for example, never invested in any publicly traded company in the US throughout his tenure as Fed Chairman. Whatever investments he had before his appointment as Fed Chairman and whatever accrued as investment from his salary in that position were put into US Treasuries and Government Bonds.

Strengthened conflict of interest laws that discourage self-dealing and insider transactions in the market are a necessary tool in development and sustaining investors' confidence. Conflicts of interest also deny the markets the opportunity to develop proper regulatory cultures and mechanisms necessary to protect against real market dislocations. Regulators are umpires (referees). They cannot officiate neutrally in the game as players and referees. The referee must be neutral.

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It is common to equate dislocations and attempts at addressing dislocations in the financial sector, especially among banks as attempts at addressing systemic risks. This is a limited view. To properly understand the importance of systemic risk in Nigeria, it is necessary to look to the market and investors. Nigerian banks and financial service providers have never been able to adequately address the capital needs of businesses in the country. Majority of Nigerian business source funds through various alternate funding mechanisms and over the past 10 years, several of the businesses have over-looked the banks and gone directly to equity markets. The current attempts by the CBN and the NDIC at addressing the inadequacy found in the banking sector are not necessarily addressing market wide systemic risks, but attempts at proper regulation of banking institutions. The numerous arguments advanced by regulators that failure of some banks in Nigeria will lead to enduring market collapse are "enhanced" market noise. They represent an elitist and flawed understanding of the breadth of the Nigerian markets. Banks are important participants in financial intermediations in Nigeria. However, it is not necessary to look at the reach of the banking sector in the overall market place for capital and funding. Otherwise, the case for understanding market systemic risks will be an exercise in preserving institutions that some regulators see as too big to fail. Addressing the problem of systemic risks is not positioning government regulators as pickers of winners and losers in the market.

Market systemic risk is a chain of failures, involving various markets, institutional and individual investors, suffering market wide losses. It is the crumbling of the entire market for the investor and market participant,

market systemic risk is the risk that portfolio diversification cannot protect against because it affects a broad range of securities in markets with significant banking penetration; that is, markets where banks are largest financiers of businesses and economic activities, the failure of large numbers of the banks could deprive such society's businesses' capital. Decrease in the availability of capital or increase in its costs are some of the most serious consequences of systemic failures. Compared to the emerging economies of Brazil, Russia, India and China, banking penetration levels in Nigeria is low. These countries have higher banking penetration levels and commercial banks in these countries play more roles in economic development than Nigerian banks. While a chain of bank failures remains an important argument of a market systemic risk, disintermediation, the inability of the Nigerian banking sector to effectively penetrate the markets as the most serious sources of funding, and the prevalence of other sources for funds by numerous Nigerian businesses, have made bank failures less critical, although very significant.

The Nigerian Stock Exchange, the ease with which companies can come to the market through exchange listings, and the ability of the SEC to properly regulate companies that are listed in the exchanges, are important to any examination of market systemic risks in Nigeria. A loss of confidence in the ability of the NSE and the SEC to properly regulate listed companies can erupt into loss of confidence in the entire financial sector (by association) and cascade into a wide loss of confidence in the entire market which can lead into systemic failure that subsumes the banking sector also. The effectiveness of regulators such as the CBN to properly understand the complex workings of institutions under their

control, knowledge of the global structure of banking, the retention of investor trusts, etc, are also factors that could trigger market wide systemic risks in Nigeria. The subprime mortgage crisis in the United States dramatically illustrated the complex nature of financial markets across various sovereign markets. An implosion in the US mortgage market sent market shivers across the world over a very long period. The confusion that engulfed the Nigerian financial sector that was precipitated by a less that articulate conduct of the CBN to confront banks under its supervision, further illustrates the need for proper regulatory measures in the markets. The damage to investors' confidence and psychic is surely taking considerable time to ameliorate.

The need for a holistic approach cannot be over-emphasised. According to an IMF data-base in 2009, John Monks pointed out that there was a record of 124 "systemic" banking crisis since 1970 alone – episodes in which bad debts soared across world economies and much of their banking sector was insolvent.

2.21 OTHER ISSUES AFFECTING SAVINGS MOBILISATION

The state of health of the banks could affect savings mobilization either negatively or positively since no rational investor would want to be associated with any bank on the verge of collapse.

Fitch Rating Agency and Agusto & Co (Nigeria) conducted a survey on the heels of the African Report on the Nigerian Banking industry as at the end of 2010. The two agencies released their reports in June 2011.

The two reports show consistency in the assessment of the selected banks. Whereas Fitch Rating assessed eleven banks, Agusto & Co assessed twenty-two out of twenty-four Nigerian banks that made their financial statements available to the company. Each report took a summarised outlook on the events of the year in question before taking a position. The variables considered in assessing the condition of the affected banks are: Tier I Capital, Deposits, Total Assets, Loans and Advances, Earnings, Expenses and pre-tax Profits. Apart from Management, each of these variables can be affixed to the contents of the CAMET ratings.

2.21.1   Ratings and Management Quality

A careful look at Appendices 3, 4 and 5 reveal the following:

- No single bank is strong in all the facets of the variables used for the assessment, i.e. the strength of any bank should be related to a particular variable.
- Some of the banks adjudged "shaken" by a previous Report are among the top ten as per Tier I Capital criterion.

The impact of all the above is that assessors of banks' health should be cautious in using loosely the terms "strong", "satisfactory", "shaken" or "stressed" to describe the health of banks in that each bank has its own area of strength and weakness too.

The quality of bank's management is critical to its long-term survival. Barr, Seiford and Siems (1993:10) or (BSS) developed a methodology for quantifying a bank's management quality using only publicly available financial information. Their approach using the variables listed below

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captures the efficiency of bank management with a transformational efficiency model described by six inputs and three outputs. The model uses data envelopment analysis (DEA) to guage a bank performance relative to others.

As shown in the list, BSS model a bank as a transformer of six inputs into three outputs. A bank's (DEA) efficiency score which results from the BSS model should be a good proxy for managerial quality. Overall, bank managers must integrate policies and techniques for transforming inputs (resources) into outputs. That is, for managing the money position, providing liquidity, lending profitably, and investing rationally into a practical asset/liability framework.

Variables listed below are elements of **Bank Management Quality Model** comprising inputs that turnout outputs:

- Bank Management Decision Making
- Full-Time Equivalent Employees
- Salary Expenses
- Premises and Fixed Assets
- Other Non-interest Expense
- Total Interest Expence
    - Core Deposits
    - Earning Assets
    - Purchased Funds

Source: Barr, Seiford, and Siems (1993)

The more efficient banks do this by controlling operating expenses, managing interest rate sensitivity, utilizing risk management techniques, and strategically planning for the bank and its future markets, according to the authors.

The empirical result of a BSS study confirms that the quality of management is crucial to a bank's survival. Scores for surviving institutions are usually statistically higher than the scores for failed banks.

Furthermore, banks that are nearer failure are found to have lower efficiency scores. These results are significant in that banks that survive can be statistically differentiated from banks that fail based on the management quality scores generated by the DEA model.

Bank management is risk management. The dynamics of risk management are so much that there is the need for the regulator and operators to continuously review its application in the banking industry. The success of these measures calls for concerted efforts. Policy sumersault, uneven playing field and de-marketing (tactical or strategic) will be antithetical to the timely realization of banks weathering through the financial uncertainty.

2.21.2   Nigerian bank industry stress testing

One of the most severe early consequences of the global meltdown after the collapse of Lehman Brothers wherein the world's financial markets were engulfed in a wave of nervousness, was a freeze up of the inter bank market worldwide. Banks were concerned about the potential losses lurking in their counterparty's balance sheet and reduced their inter bank

lending drastically and limited to overnight or very short tenor. In response, central banks cut lending rates, implemented extra-ordinary liquidity provision through lending against all forms of security to banks, without much success. Frozen inter-bank lending only started to thrive much later when regulators led by the US Federal Reserve, implemented bank recapitalization based on the results of stress testing.

In Nigeria, we have seen similar pattern. The CBN introduced the extended discount window to assist banks with liquidity pressures. Despite that liquidity fall-back in the system, local banks are still hoarding cash and are reluctant to lend to one another in the inter-bank market. The result of this was severely escalating inter-bank deposit rates leading to CBN taking the drastic action of capping rate thereafter.

2.21.3 The UBA Example

At the United bank for Africa (UBA), three types of stress were performed as part of on-going stress testing framework execution. These are:

- **Moderate PBT stress:** This refers to the negative impact on planned PBT levels, due to moderate stress scenarios. In other words, mild recession. In terms of the bank's earnings at risk tolerance, they still want to maintain dividends under such scenarios. The bank would then adjust their risk appetite and strategy, should the results of moderate stress testing exceed their earnings at risk tolerance levels.

- **Liquidity stress test:** This refers to the negative impact on liquidity levels, should extreme liquidity events occur – large deposits outflows that cannot be replaced, significant reduction in counterparty credit lines, etc. The bank would then adjust their

funding strategy, lending policies, capex plans, etc. should the results of liquidity stress tests exceed the bank's liquidity risk tolerance levels.

- **Capital stress test:** This refers to the impact on the bank's projected capital levels, should extreme scenarios realize and the bank tends to incur large losses, eating into their capital. In terms of the bank's capital adequacy risk tolerance, they would still want to operate with sufficient buffer above minimum regulatory capital requirements, to contain any extreme scenarios threat. The bank's response would be to adjust their risk appetite and strategy, should the results of extreme stress testing exceed their capital adequacy risk tolerance level.

Although UBA applied all the three types of stress testing, they place more emphasis on liquidity and capital stress tests, given the current state of the global financial situation. The bank perform bottom-up stress testing on all their risk portfolios. That is, operational, market, credit, investment, etc. Results of these stress tests are then used to adjust their risk appetite and change their risk taking strategies. This is an ongoing process.

Based on the results of their stress testing, they have taken some tough decisions to limit the size of potential future extreme scenario losses, should they occur. These include termination of margin lending and reduced acceptance of shares as collateral, especially at any time of financial crisis, given the inflated stock market that may arise; curtailment of mortgage lending when the stock market declines significantly, most specifically based on the high correlation between stock market and housing prices in other countries; reduction in the bank's key lending at

the onset of the Naira's decline; termination of proprietary trading activities to mitigate the negative impact of high market volatility; changes in risk acceptance criteria, that is, increased collateral coverage, reduced loan terms, reduced debt service ratios in consumer lending, and so on.

These were tough decisions, as they had immediate negative revenue implications. Senior management of the bank, however, has been taking a strategic view on these issues and positioned the bank for long term sustainability and growth, sometimes at the expense of short term revenue targets.

Whereas other local banks have yet to begin to quantify the impact of extreme stress scenarios, UBA has already adapted a risk strategy and appetite to mitigate their potential impact. I had a rare opportunity to observe some of these stress testing in practice in 2010 at their headquarters in Lagos, and I am confident that their risk portfolio are sufficiently robust. Furthermore, the bank will be able to ride out of a severe storm from a liquidity, profitability and capital adequacy perspective, should worst case scenario materialize in the Nigerian economy or banking system.

2.21.4   Regulation: Local or International?

As calls for restoration of confidence in the banking system continue to rise, it is found that with each new phase of the global crisis, a new area of neglect of regulation is disclosed. And, one institution on which much will depend in the shake-up of global financial regulation is the Basel system. Basel is the series of risk-based rules devised under the auspices of the Switzerland-based Bank for International Settlements that governs banks.

However, when the global banking system stumbled, much of the blame for the future was heaped on Basel. Indeed, there was a widespread call for Basel to be completely abandoned and replaced with a new architecture.

Now it is widely felt that Basel needs to be amended rather than replaced. Do we need more rules and regulations? asks Peter Halm of the Cass Business School in London. No, we need smarter regulators. We need the existing rules to be better and more intelligently applied.

The Basel rules should form a basis for banking regulations, confirms Stephen Lewis, the chief economist at Monument Securities, "but they are not quite sufficient". Indeed, Lewis believes that Basel may be responsible for some of the complacency and over trading that took banks over the brink in recent years.

Banking regulation falls into three parts, according to the Basel arrangement. The first provides a format for the relationship between regulatory and risk, the second assesses the relationship between risk and remuneration, and the third places a requirement on banks to furnish useful information on a basis of transparency.

Banks rather than regulators should take the blame for recent failures, says Hahn. "That capital was based on risks, and those were misunderstood. The rules that provided an assessment of capital didn't include trading portfolios. Banks had a lot of liquid assets on their books that they traded through. They didn't need a lot of capital for that because they thought they could get rid of those tradable assets", he explains. "Many of the losses in recent years occurred on the trading books. We have learned a lot more about how the rules should work. We need to refine the risk capital

measures rather than throw them out. We need smarter application of the rules".

There are some notable gaps in the Basel rules, says Lewis, who argues that they fail to deal with some fundamental aspects of banking behaviour and risk. "There's a feeling that the Basel rules may form a basis for going forward, but some features of that system contributed to the problems that arose. The pro-cyclical character of the capital requirements, the fact that banks are able, through retained profits, to build up their capital in good times makes them feel very comfortable and leads to do all kinds of unwise things", he explains.

"The problem with this market-based approach is that when the markets see the banks' capital shrink during the bad times, they are not going to say, "This is what happens in the economic cycle". They will say, "Better be careful, there could be an accident soon", Lewis adds.

Some economists go further than Lewis and argue that the crisis shows the Basel rules are inadequate. Prime among such critics is the United Kingdom monetarist economist Tim Congdon. He puts it bluntly: "The Basel rules have failed. Some people say, if only Basel II were being implemented, the crisis wouldn't have happened. I mean, for Heaven's sake! The Basel rules are... like a tower of Babel in international banking. You won't get all these national regulatory systems under one uniform set of regulations".

Congdon is far from alone. The abandonment of domestic regulatory structures in favour of an international super-regulator, like the abandonment of Basel, was also demanded by many observers at the heat

of the crisis. Indeed, it could be argued that Gordon Brown, the then UK prime minister, once pushed such a point in an address to the G-20 group of countries. But other voices argue that a global regulator would encounter impossible conflicts of culture, and tight local regulation would serve as a more effective brake on banks' unrealistic ambitions and techniques. "An international approach can be a useful means to distract attention for politicians saddled with a highly embarrassing economic situation", says Hahn, "but there are many complexities in implementing international regulation". He says that social and cultural differences in banking practices foil the creation of a single set of global rules. "One rule doesn't fit all, so rules need to be localized", he warns.

"If you have a global control function, the regulator needs the money to step in when a crisis boils up", Hahn re-affirms. "But I wonder how keen UK tax payers would be to bail out a foreign bank."

Domestic authorities will also have difficulties with such an approach, Hahn says. "If the international super-banking regulator being prescribed by some were to take over Citi and demanded it be broken up, somebody in Washington might say, "That's our biggest bank, we can't have guys based in Switzerland deciding what happens to our bank".

Hahn does not rule out the possibility that structures may be introduced to facilitate cross-border regulation, but he insists that "there is no substitute for local regulators governing their own banks."

Some are blaming the loss of a close relationship between a local regulator and its local banks for the crisis in banking, says Congdon "The central bank is the regulator of the banking system. It watches both liquidity and

solvency of banks, and it makes sure that there are never crisis of this sort because it is close to the banks, and it lends to them in all sorts of discreet and quiet ways".

Such a localised view of regulation is, however, flatly contradicted by Willem Buiter, a former member of the Bank of England's Monetary Policy Committee and an academic at the London School of Economics. "You should get as close as possible to regulating on a global level," he says. "There needs to be a contact with the global regulator in each market segment, at least for those businesses that cross borders".

A central and global regulator faces practical obstacles, says Buiter, but he asserts that a regulatory authority could be created for each power bloc as a first step to the global banking regime. For example, the European Union could establish a Europe-wide regulator. "This entity would strike agreements on standards with regulators in other key places like the US and China, the Gulf Cooperation countries and India", he says.

The ferocity of those years' crisis could distract politicians and regulators from the necessary rethink of its flawed structures and approaches. "Regulators are so busy fighting fires that they are missing the need to do something about the institutional failures that brought about the recent crisis, says Lewis. "If these challenges are not thought through deeply, I see no reason why more and even harsher crisis should not quickly arise and put the system at even greater jeopardy".

Finally, Young (2013) cites Basel III which came into operation in January 2013 as defining the rules that will govern global regulatory and capital standards over the next decade. The basic tenets are driven by the systemic

and institutional weaknesses which brought the global financial system to its knees in 2007. However, "compliance with Basel III will require significant investment in technology and business processes, as well as a solid plan of attack", Young warns!

Worried by the resurgence of huge toxic loans in the banking sector, the MD/CEO AMCON Mr. Ahmed Lawan Kuru at a parley April 4 2019 sought reintroduction of Failed Bank Act. to curb financial rascality among bankers and halt grievous impunity taking place along the credit process. In the spirit of Basel III the Central Bank of Nigeria (CBN) is set to introduce new capital rules in second quarter of 2019. With this proposal, the CBN is moving to align with the global agreement reached a couple of years ago in Basel in Switzerland – otherwise known as Basel III.

Expectations are high that the proposed new capital rules by the apex bank will address those lapses that encourage the growth of non-performing loans (NPLs), sundry insider abuses and laxity in the banking industry.

In another development, Guardian Editorial (2019:19) in its commentary says is gratifying to economy watchers in the sense that rules that will guide the operations of the Chartered Institute of Bankers of Nigeria Disciplinary Tribunal (CIBND) have been approved by the Federal Government. The cheery news means that member's unethical and unprofessional issues, infractions etc, can now be addressed.

2.22 STATEMENT OF HYPOTHESIS

Null hypothesis statement is:

"Interest rate deregulation in Nigeria has no significant impact on savings, investment and general economic development".

Alternative hypothesis statement is:

Interest rate deregulation in Nigeria has significant impact on savings, investment and general economic development".

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

This chapter on methodology is intended to provide some set of standards which will offer guidance to an orderly and systematic approach to carrying out this study. Concepts are firstly explained to show their understanding before specifying how they are utilised in the research.

Under this setting, the study is a systematic investigation of a particular phenomenon, using a set of procedures, which is embodied in the scientific methods of presentation. In other words, an organised inquiry that aims at information for solving identified problems. It is also a quest for new areas of interest or problem through the application of the scientific approach or process of investigation.

Methodology therefore, is that part of the research project that sets out to state how the researcher intends to carry out the study. Put the other way, the step-by-step method with which the study is to be completed through description and methods and procedures adopted in the collection and analysis of the data.

As an overall plan of how to obtain answers to the questions that are being studied and much as how to handle some of the difficulties that may be encountered, it specifies the type of research approach to be adopted as well as its implementation.

3.1   Research Methods (design) or Approaches used

Before embarking on this research, there was need to structure the plan of investigation. This is so required as to help in determining the type of relationship that exists between or among the variables in the intended study. If this is determined, clue as to how to structure the questions or items which are intended for gathering will become cleaner. This information will then be analysed so as to obtain the desired result.

Different types of research require different designs that are suitable for the study that is to be conducted. Thus, like in every research endeavour, design chosen depends on the level of mastery of the subject matter. The researcher must however, bear in mind the fact that the design must measure appropriately the phenomenon that is of interest and obtain data that will validly lead to a useful conclusion.

The research design is a blueprint or scheme that is used by the researcher for specific structure and strategy in investigating the relationship that exist among variables of the study so as to enable the researcher collect the data, which will be used for the study.

Research designs are of three main types: survey design, experimental design and ex-post-facto design. However, Ex-post-facto Design has been adopted in this research. It is a design that assumes the single case design of a quasi-experimental design since it is not an experimental research. An existing case is observed for some time or over a period of time so as to study and evaluate it. An experimental design is a plan of the process that enable the researcher to test his hypothesis by reaching a valid conclusion about the relationship between the variables that are being tested.

3.1.1　　　　Problem Specification

One of the important approaches employed in this research is 'problem specification'. A problem cannot be solved or be considered in any way until it is recognised and understood, declares Mackworth (1969:242). That means that problem has to be clearly specified. The realisation that a problem exists comes with the realisation that the situation is unsatisfactory in some way. The process of realisation, however, can occur in two ways, exemplified by the 'sore thumb problem' and the 'hidden problem'. The former is fairly less difficult to deal with than the latter which is where this research belongs.

Furthermore, problem finding, Mackworth points out, is more important than problem solving and involves cognitive processes that are very difficult from problem solving and much more complex. This statement underscores the relevance of problem specification in research methods or approaches.

At the outset of an investigation the first kind of thinking called for is analytical, which is mainly concerned with seeking, analysing and understanding the factors which give rise to the problem, and the possibility of, or the shape of, a solution. The phase starts with the isolation and understanding of the problem, coupled with a deduction of the nature of the work required. Hence, "the Statement of the Problem". Effective or proper approach cannot be adopted without problem specification and or definition. In other words, this research has been grounded on logical principles by first being very clear as to what is meant by a 'problem'. And, this is taken to be any situation sufficiently

unsatisfactory or intriguing as to stimulate someone into taking thought or action.

Although this covers in one sentence whole issues as diverse as improvement problem, the objective problem, the deviation problem, the potential problem and the evaluation problem. Of course, each type of 'problem' calls for a different approach and or methods of investigation, employing different techniques with different emphasis. As Raybould and Minter (1971:21) put it: "The researcher needs to be problem, not techniques, minded".

3.1.2   Stated Hypotheses

Research being any organised enquiry that aims at providing information for solving identified problems or a quest for a new knowledge pertinent to an identified area of interest or problem through the application of the scientific approach or process of investigation has always been linked with peculiar approaches. One other such approach in this study is Hypothesis. If not for anything, stated hypotheses serve as a guide for research work.

Hypothesis is a statement of logical guess, which reflects the possibility in the occurrence of an event under investigation. It offers solutions to the research questions. It also tries to establish a relationship or difference between the variables involved in the investigation. A hypothesis is subjected to statistical test so as to prove if it will be retained or rejected. This is based on the fact that it is in conformity with common occurrence or the form of knowledge in view at a given point in time, using data or information gathered, which are related to the study in view. The

hypothesis tells the researcher exactly what he needs to find out in the study.

Hypotheses are of two types and are classified according to how they are stated. These are: research hypotheses (which are stated in declarative form) and statistical hypotheses (which are stated in null or no effect or negative form and alternate form).

The type of hypothesis employed in this research is statistical hypotheses (which are stated in null or no effect or negative form and alternative form).

This is so called because it is the hypothesis tested in a research. It states a procedure of "no effect" in influencing the outcome. A null effect means that there is no relationship or difference between the variables under study. It implies that any occurring relationship is a chance – relationship and not a true relationship.

One major disadvantage of null hypothesis is that it does not express the researcher's true expectation with regard to the result of the study. In order to solve this major crisis, an alternate hypothesis is stated: this hypothesis is the non-directional research hypothesis and it is stated alongside the null hypothesis.

The hypotheses are statement of expected outcome of the relationship that exists between the variables, which are being investigated. They form the tentative answers to the research questions, since they are stated using the questions generated for the research as a guide.

3.2 Justification for Approaches or Methodologies Used

(a)   The research design adopted in this research ensures the appropriate use of the under-listed areas of a research study:

    (i)   The variance control, that is, the measure of variability which is used to answer research questions and test hypotheses.

    (ii)   The production of data that will be used to answer research questions and test hypotheses.

    (iii)   The control of intervening or extraneous variables.

    (iv)   The maintenance of both internal and external validity. That is, it should measure what it is supposed to measure, and

    (v)   The appropriate order of the procedure of observation and investigation.

(b)   One of the important approaches employed in this research is specification of research problem that is unique in nature. Its justification lies in the fact that it fulfilled the following conditions or criteria of a good research problem.

- The variables should express a relationship.
- The problem should be clearly stated in form of question and ambiguity should be avoided.
- The problem and its statement should indicate the possibilities of empirical testing. It should distinguish researchable problems from non-researchable problems.
- The problem must be underscored by ethical considerations such that it impacts positively on people and society.

- The problem must be within the scope of competence of the researcher or investigator given his current level of reasoning, skill, availability of materials to be used, the time at his disposal for research execution and constraints imposed by other environmental contingencies.
- The problem must not be trivial as to make it insignificant or so broad as to make it unaccomplishable.

Other issues to consider when stating research problems are that of interest – the problem should be exciting and interesting; this is so as to derive satisfaction from one's effort.

Finally, the problem must have relevance or value to the area, which it is investigating. It must be worthwhile to life's development both theoretically and practically.

(c)   The justification for the hypotheses approach is that the hypotheses formulated in this research have the necessary Characteristics of Hypotheses.

A good hypothesis must fulfil the following conditions:

- They must have direct bearing on the problems stated.
- They should state the relationship or difference between two or more variables.
- They should be clearly and unambiguously stated.
- They should be testable such that their implications can be deduced, and

- The guesses solution in a hypothesis should be reasonable such that it does not form an open conflict with studies that have been confirmed, validated and established.

3.3   Research Instruments or Tools used for Data Collection

Instrumentation in research refers to the instrument which the researcher uses in collecting or gathering data. Or more practically, the means through which research data are gathered.

Research instruments vary considerably depending on research methods (design) or approaches used or even circumstances at a particular point in time. Although examples abound but include the following:

(i)   Questionnaires

(ii)   Opinionnaires

(iii)   Interviews

(iv)   Observations

(v)   Surveys etc. etc.

In this research, combinations of these instruments have enabled collection of the aggregate data derived from mainly secondary sources. These include the following:

(i)   Various publications of the Central Bank of Nigeria (CBN) such as the Monthly Reports, Annual Reports and Statement of Accounts (various issues).

(ii)   Economic and Financial Reviews augmented by other sources such as the IMF's International Financial Statistics and so on.

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3.4   Validation of the Research Instrument

As in any research endeavour, this study's functional goal is to provide answers to the lingering research problems as well as control the effect of unwanted variance, such as extraneous variables. This is so as to ascertain that the result of the study is valid so that it can be generalised over the range of parameter.

In order to achieve this, this research adopts an approach involving some measurement (in research parlance) which is used to solve questions that many arise from the study through a series of tests which are actually constructs devised for this study. Whatever form this statements or questions may take, it boils down to the fact that a test exists to serve the purpose of validation.

Significance of Test: A test can be explained as a means of measuring knowledge, acquired skills feeling, intelligence or aptitude of an individual or group.

A good research study is determined by the quality of the procedure followed in collecting and analysing data. Thus, in order to maintain accuracy in the procedures used for measurement, assessment, etc. it is important to consider the attributes of these forms of measurement etc. These attributes include: validity and reliability.

Validity of Test: This refers to the degree with which a research instrument measures what it purports to measure as well as the population is intended for. It refers to the truthfulness of the instrument and the population of study. This implies that it should measure the characteristics, which it is intended to measure. For instance, as this research intends to

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study "the impact of interest rate deregulation on savings mobilization", the research instrument therefore sets to measure savings deposits throughout Nigeria's financial system and not the bank's location or who the depositors are.

More importantly, the items or questions in the instrument must be directed at savings making up the aggregate. If neither of this is achieved then the research instrument is said to be invalid.

3.4.1 Types of Validity

Validity is evaluated in terms of purpose. It is set to evaluate an instrument based on specific functions, which it might be performing. Thus, researches are typically faced with four major types of validity.

The research instrument(s) used in this research work satisfied the requirements of these four types of validity as follows:

(i) **Content (face) Validity:** This is the extent to which the instrument measures the overall appearance and subject matter in line with the set objectives of the study. In other words, the items set or statements made should reflect the purpose of the envisaged problem of the research study (objectives).

It is important the construction of the items must be well-organised in sections so as to give appropriate value when checked or looked at, a glance. It should consider both the items, as well as the sample area involved in the study. In the instance of this study, the items ensure that it measures all savings deposits in all such institutions where they are made and not just a few.

(ii) Predictive (criterion-related) Validity: This is the ability of the instrument to predict or forecast a specific behaviour in a particular setting. It tells the future behaviour or performance of the subject in question before establishing a relationship between the present instrument and some other criterion. In the instance of this research, the instrument could be used to predict the future trend in savings behaviour over various financial system segments. Using the result, one can easily predict or make a reasonable forecast on savings mobilisation in any direction.

Predictive validity could be used to advise on general basis, on whether a certain target on savings (at whatever levels) is achievable or not.

A research instrument with predictive validity is also capable of being used as tool for prediction as well as trend extrapolation.

(iii) Construct (theoretical) Validity: This is the extent to which the instrument measures the psychological abilities of the subjects or respondents. It concerns itself with operational definitions. For instance, a measure of personality traits such as self-esteem is a variable of theoretical measurement, whose appropriateness, in relation to savings could be investigated.

(iv) Concurrent (comparative) Validity: This is the extent to which the instrument correlates with a well-known standard instrument, which can be used for the same purpose. Thus, for a well-known standard data, an instrument may be administered and the scores obtained can be correlated with that of the standard scores or

results. If correlation is high, then the instruments are valid and vice versa.

3.5   Reliability of the Research Instrument

A research instrument is said to be reliable if it measures the same variable at different times of the same set of target population, and obtain results, which are consistently similar. In other words, the results obtained from the administration of such instrument are the same or close to being the same every time it is obtained.

Reliability, however, is the degree of stability of the measure of variables or research instruments.

In this study, the research instruments are reliable on the grounds that data collected provides credible information with regard to savings deposits in financial institutions in Nigeria. Moreso, the Central Bank of Nigeria's bank examiners resident in those financial houses would ensure due diligence, transparency and accountability thus lending authenticity to the savings deposit data.

3.6   Research Population and Sample Size

Research Population is the population to be studied and refers, to all subjects, objects or members that form the totality of the specified set under investigation (as far as research is concerned).

In this study, generality of members of the public who save their monies with financial institutions are attributes of interest.

The requirement for population selection for a research study is the specification of the group to which the result of study can be applied. However, the entire population is still subjected to sampling so as to choose the actual participants for the study.

In an investigation such as this, the entire population is not made use of. This is so as to make the exercise unwieldy. Moreso, to have a practicable and serious sample for study. There are, however, various methods of obtaining samples. They vary in cost, effort and level of skills required.

In this study, the design of sampling plan includes; the method, the specification of sample size and the selection procedure for enlisting the subjects.

3.6.1   Sample Size

The precision of an estimate of some population parameter depends more on the sample size than on the sampled proportion of the total population.

This is the determination of the proportion of subjects, elements or members drawn from a population through quantitative means. This is because it involves critical and careful numerical activities that are used to determine this. In order for a researcher to know the number of units, subjects or members to use for his study, he needs to consider the following factors:

   (i)   Attributional distribution among the population.
   (ii)   The nature of decision to be made with the result, and
   (iii)   The amount of sampling error that he is ready to accommodate.

An ideal sample is large enough to serve as an adequate representation of the population about which the researcher wishes to generalize and small enough to be selected economically in terms of subject availability, expense in terms of time and money and the complexity of data analysis.

The determination of sample size should be as a result of careful reflection on the researcher's part taking the following into considerations.

- The limit of error allowed in sampling, if a larger sample size is used the less error is experienced and vice versa.
- The level of confidence or probability of error that is desired, and
- An estimate of dispersion or standard deviation of the population from which the sample is selected for evaluation.

Judging from the parameters above, sample size can be determined non-statistically by using a face value evaluation. This implies that a smaller percentage is set for larger population and a larger percentage is set for smaller population. For instance, for a population of about 3000 units, a 10 per cent mark, which turns to about 300 sample size, can be used for the investigation. While for that of say 500 units, 20 per cent mark which turns to about 100 sample size will also give a more realistic value for the purpose of generalization and a low level of biases or error in judgment.

The sample size adopted in this study fulfilled the features of a good sample size. And, in order to ensure such a widely covered sample, the following information were borne in mind:

(i) A larger sample size attracts less sampling error and vice versa.

(ii)   A smaller or less-covered sample size gives a result that may not be generalized to the population.

(iii) Inasmuch as the determination of sample size does not attract a fixed percentage, the researcher should base his decision on the fact that for smaller population, a greater sample proportion may be drawn than for a larger population.

(iv)   The nature and characteristics of research type should be considered before determining the sample size. For instance, the experimental research with tight control should attract a less sample size (all other factors being taken into consideration) than a descriptive or ex-post-facto study's sample size. This is to give room for effective and convenient analysis of results which could be easily completed in both cases.

(v)   The degree of variability of population, situation or phenomena. In this case, evidence clearly instructs that a higher sample size should be drawn for a population that varies greatly in nature and vice versa.

Although deregulation of Nigeria's financial system commenced in 1986 amounting to 33 years so far, the sample size in this study is represented by the aggregate savings deposit (annual data) for 12 years between 1997 – 2009.

3.7   Sampling Procedures Employed

The sampling method adopted in this research is Judgment Sampling. This sampling type makes use of typical cases, or so to say, among the population to be studied, which the researcher considers will provide him

with the data needed. The units are selected based on the researcher's opinion of those members that proceed from the sample population which he wants to study.

This makes the method less expensive and less time consuming. For instance, in this study carried out in Nigeria to examine the impact of interest rate deregulation on savings mobilisation, it would be enormous task, if not impossible, to start at the time of deregulation in 1986 to present day 2013. A good judgment sampling approach informs that a grouped period, of say, between 1997 and 2009 would present a good-enough sample.

The procedure usually adopted for obtaining a sample from the population is categorized into two. And these are probability or randomized and non-probability or non-randomized sampling methods. These two categories also have their sub-divisions, where each division has its specific steps for arriving at the desired selection. However, a general procedure to be followed by a researcher before going into sample selection is outlined as follows:

Step 1 – The identification of the population.
Step 2 – The determination of the required sample size.
Step 3 – The selection of the sample

Sampling Procedure

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                          Sampling Procedure
                                 │
                                 ▼
          ┌──────────────────────┴──────────────────────┐
          ▼                                              ▼
   Probability Sampling                        Non-Probability Sampling
        Method                                        Method
          │                                              │
          ▼                                              ▼
1. Random Sampling (simple)                    1. Quota Sampling
2. Systematic Random Sampling                  2. Judgement Sampling
3. Stratified Random Sampling                  3. Panel Sampling
4. Cluster Sampling                            4. Accident or Convenience
                                                  Sampling
```
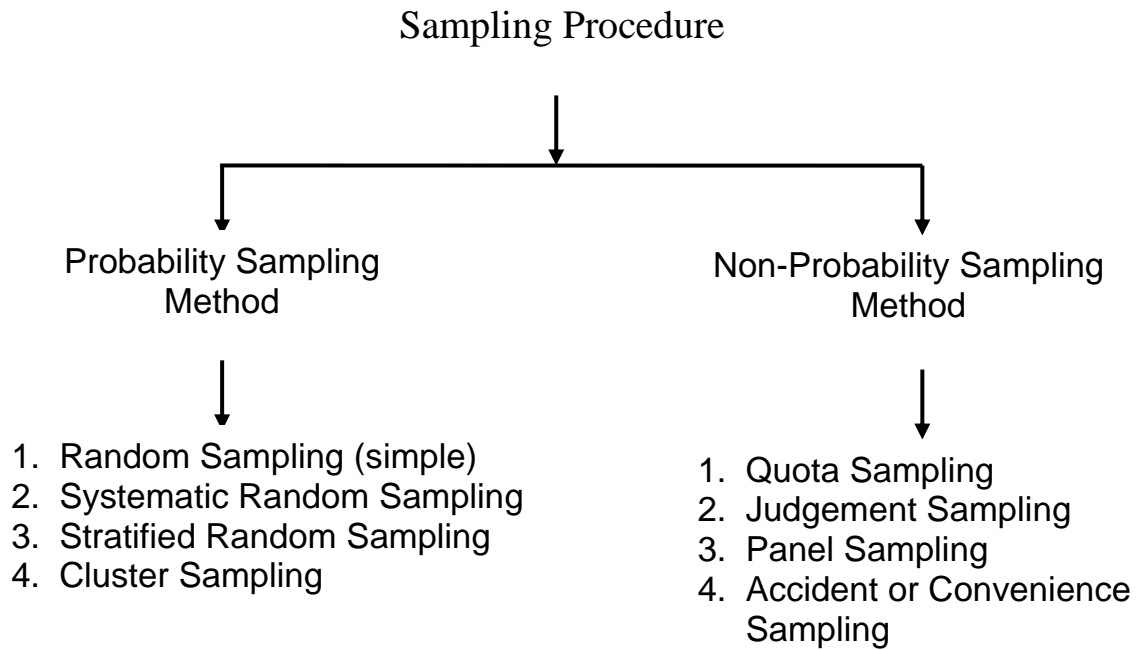
3.8   Justification for using Judgment Sampling

A knowledgeable researcher who knows exactly what he desires, does not need to work with too large a sample size, since he already knows the set of sample, which he needs to approach for the attributes he intends to study.

This is exactly the circumstances faced in this study and the rationale for this approach has already been cited.

3.9   The Population

In conducting a research, such as this, it is hardly possible to include all members of a given population in the investigation. This is because the population members may be too large to be reached at a particular point in time due to geographical coverage. If a researcher attempts to cover all the population needed in his investigation, he will discover that he might

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spend more time, money and effort. Thus, he should try to select a reasonable sample of the population for his investigations. The more representative the sample, the more the results from it can be generalised to other members of the population and it will be free from biases.

A population, in research, is made up of specific conceivable traits, events, elements, people, subjects or observations, which relate to the situation of interest in the study to be conducted.

3.9.1   Types of Population

There are two main types of population in research studies: these are finite and infinite.

(i)   Finite Population

Finite population is population that is of estimable and conceivable size or extent. For instance, "all savings deposit in financial institutions in Nigeria". The population, that is savings deposits, can thus be counted.

(ii)   Infinite Population

Infinite population is a population that is of an inestimable size or extent. For instance, "all fish consumers in Nigeria".

Simple as this may look, when talking about its estimation, it is difficult to estimate, much as a researcher may wish to cover the entire population size. This may be due to some extraneous factors which also include logistics.

A researcher must, however, have a well defined population so as to avoid inclusion of elements or subjects that do not actually belong to the population of interest when conducting the study.

The population for this study comprise aggregate savings deposit. And, this includes public and private savings in commercial banks, merchant banks, federal savings bank, national provident fund, federal mortgage bank and premium bond savings certificate.

3.10   The Sample

This is a reasonable number of selected traits, events, subjects or members taken from the population as a representative of that population which are used for investigation or study.

Samples are selected by using statistical or other appropriate means, so as to ensure an even selection of the subjects involved and thus avoid biasness in selection. Representativeness is essential because the result of the study which is derived from the sample selection made, will be used ultimately to generalise its effect on the entire population.

Thus, the more the samples involved in the study the more the power of generalization on the entire population of interest and the less the level of biasness sustained.

3.10.1   Reason for Sampling

One major reason for sampling is to reduce the data to a manageable proportion and as such reduce its cost and time spent. Other reasons are:
- It gives room for a thorough study by affording a better supervision than a complete coverage from all population.

- It enables the researcher to obtain a quicker result, and

- It provides accurate measurement of the similarities among the elements of such sample.

3.10.2 Process of Sample Selection

This researcher also ensured that the following steps were taken into account in selecting a sample.

- Identifying the population by defining it to a specific situation.

- Determining the required sample size, and

- Selecting samples using definite techniques.

3.11 Statistical Techniques Used in Analysing the Data

The distinction between Statistical Techniques used in analysing data and Statistical Methods / Instruments used to test hypotheses is blurred. However, there are different types of statistics available to a researcher. These types, which are two in number, are:

(i) Descriptive statistics and

(ii) Inferential statistics.

In this study, descriptive statistics has enabled the researcher to meaningfully describe large numbers of scores for a small number or indices. Notably, if such indices are calculated for a sample drawn from a population, the resulting values are referred to as statistics. If they are calculated for an entire population, they are referred to as parameters. A parameter is a population value or characteristic. For instance, population mean, standard deviation, and so on and a statistic is the simple value that is used for the estimate of the population parameter.

Descriptive statistics has been used in this research study for the purpose of bringing data into order; that is, data preparation, tabulation and summarization. Examples of statistical techniques used in this study to describe and analyse research data include and not limited to:

- Measures of central tendency – Mean, Median and Mode

- Measures of dispersion or spread – Range, Variance, Standard deviation

- Measures of relationship – The relationship between two or more variables or sets of data can be measured using correlation.

- The coefficient of Determination – This is a measure of the interpretation of correlation coefficient that is used to predict or determine the variance between known and unknown factors, which affect the variables that are to be explained in the data analysis.

Another statistical technique used in analysing the data is Inferential Statistics which helped the researcher in this study to infer from these statistical measures of central tendency and dispersion, certain meanings and other important relationships which are hidden within the data. Inferential statistics deals with inferences about the population characteristics based on the samples drawn from such a population.

In this research, however, the interest of the researcher is beyond mere description of the sample characteristics (statistics). Rather, interest in this study lies in generalizing results on the statistical inference.

Inferential statistics are concerned with determining how likely it is that results based on a sample or samples are the same results which would have been obtained for the entire population. To address this issue

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properly, in this research study, it was ensured that the sample drawn from the population is highly representative.

The major statistical technique used in analysing data in this research is Regression Analysis. It is a statistical analysis technique which yields an equation which relates two or more variates and minimises the sum of the squares of the deviations of a set of values of one variate from a curve or surface in n dimensional space. Or, more simply stated: It is the determination of the association or relationship that exits between two variables for the purpose of forecasting or making predictions for the future values of the variables under study.

Linear Regression estimates the coefficients of the linear equation involving one or more independent variables. For each variable member of valid cases; mean and standard deviation are examined. And similarly for each model regression correlation matrix, part and partial correlations, multiple R, R2 adjusted R2, change in R2, standard error of the estimate, analysis of various tables, predicted values and residuals. Also 95% confidence intervals for each regression coefficient, variance, covariance matrix, Durbin Watson test, distance measures, Df Beta, Df Fit were found useful for the many stages of data presentation and analysis.

3.12   Statistical Methods/Instruments Used to Test Hypotheses

The choice of an appropriate statistical method of analysing data is as a result of many factors such as the sample size/characteristics, hypotheses being tested, research design and statistical test postulations and assumptions. There are two divisions within the realms of inferential

statistics that give credence to statistical testing. These are Parametric and Non-parametric statistics tests but this study is concerned with the former.

Retrospectively speaking, statistical analysis and research methodology are vital aspects of this study as in every research project and the two often go together. In fact, one is a corollary of the other. The task remains that the data collected through the research instrument(s) have to be subjected to statistical analysis for the purpose of yielding results concerning the phenomenon (the variables) being studied.

In this study, steps were taken responsibly in choosing appropriate statistical method(s) of data analysis to use for the research. Parametric statistics, for instance, has been applied in this study to provide data that were derived from samples so that one can generalize the findings beyond such samples. Some of parametric statistics test found useful in this exercise include:

(a) Critical T-test wherein t-statistics is computed and used to test the significance of coefficient of independent variables.

(b) The Analysis of Variance (ANOVA) is used to determine the extent of variance in dependent variables that are caused by independent variables. This function is particularly achieved when it isolates the factors that are responsible for variation in the dependent variables of study.

Other examples of statistical methods/instruments used to test hypotheses include:

Durbin Watson (D-W) statistics has been utilised in this study to determine the existence of auto-correlation.

F-statistics has also been used to determine whether there is significant relationship between the dependent variable and the independent variable.

Econometrics is used in this study. It is the application of statistical methods to economics. As a model, it is used to estimate the effects of one variable on any other as well as extent of reliability. As a model, statistical tests are employed to tackle various questions.

3.13　　　Methods of Data Collection

Data can be described as pieces of information gathered which are to be used for making decision after analysis. The information or data would then be subjected to various statistical testing before they are used for such decision-making.

There are two main classifications of sources of data. These are primary and secondary sources but this study is concerned more with the latter.

The secondary sources of data include all the types of information from the primary sources but this time, they are recorded, reported or supplied by someone else, who is not directly present at the actual place of occurrence. Thus, when a primary piece of data is refined after it is generated by classification, publication or analysis, it creates a secondary piece of data. And, these can be obtained from Research, Statistics and Planning Units of the Ministries, companies and industries, Central Bank of Nigeria and Federal as well as States or Local offices of Statistics.

3.13.1 Data Gathering

Data gathering is the process of collecting data from either the primary or secondary sources for the purpose of the study analysis.

Data Collection Instrument has been described as a device for collecting the data or measuring variables which are for subsequent use.

There are two main methods of collecting research namely:

- Survey methods; and
- Non-survey methods

In this study, the non-survey method has been used to collect data about subjects (in research parlance) without necessarily involving any direct contact between the researcher and the subjects.

Succinctly, in data gathering the researcher systematically obtains data about the phenomenon that is being investigated through the attendant recording and all that it entails.

This study made use of aggregate data derived from secondary sources. These include the following:

- Various publications of the Central Bank of Nigeria (CBN) such as Monthly Reports, Annual Reports and Financial Reviews.
- International Monetary Fund (IMF's) International Financial Statistics and other relevant publications.

These include public and private savings in commercial banks, merchant banks, federal savings bank, national provident fund, federal mortgage bank and premium bond savings certificates.

3.13.2   Validating or Testing Data

Data collected in this study was tested or validated to check if they are authentic. Thus, they are subjected to internal and external criticisms or purpose.

- Internal Criticism: This determines the worth, value or credibility of the data collected
- External Criticism: This adjudges if the documents are authentic or forged.

In internal criticism, questions such as these are asked.

- ✓ Are the data in agreement with known facts?
- ✓ Was the author biased? Or
- ✓ Does he have any handicap that threatens the credibility of the data such that might lead to misinterpretation of historical facts?

These questions are asked in order to validate such data through this means.

In external criticism, it answers such questions as this:

- ✓ Was the report prepared by the actual person who was meant to prepare it?

This form of test validation demands that the researcher MUST be credible, honest and of very high integrity. He cannot afford to jeopardize

historical truth because of any self-centeredness. And, he must realise that whatever information given will be constantly referred to for the purpose of other research studies.

3.14   Auto-correlation

In statistics, the Durbin-Watson statistics is a test statistic used to detect the presence of auto correlation (a relationship between values separated from each other by a given time lag) in the residuals (predicted errors) from a regression analysis.

John von Newmann applied the Durbin-Watson statistic to the residuals from least squares regressions, and developed bounds tests for the null hypothesis that the errors are serially uncorrelated against the alternative that they follow a first order auto regressive process.

Although the range is always between 0 and 4, in this research study, if the Durbin-Watson statistic is substantially less than 1.6, there is evidence of positive serial correlation.

This is the range recommended by Denis Sargan and Alok Bhargava who later developed several von Neumann – Durbin-Watson type test statistics for types of regression analysis.

CHAPTER FOUR

4.0   PRESENTATION AND ANALYSIS OF DATA

The use of statistical methods of analysis in a research project is much more than just the manipulation of data. It serves the fundamental purpose of description and analysis. And, to assure this objective, and remain complaint with stipulated criteria, this study ensures their proper application which involves getting the following attributes:

- The ideas that are needed to gather the data for answering research questions and to test hypotheses.
- The methods of selection, gathering, organisation and analysing these data.
- The assumption underlying the statistical methodology to be used.
- The generalisation of the conclusion drawn from data analysis.

In the light of the above, we can conveniently regard Presentation and Analysis of Data as the hallmark of a quantitative process of gathering, organising, analysing and interpreting numeric and non-numeric data for the purpose of making a general application, which may be used to explain the phenomenon at hand and to predict the future occurrence or trend.

As in this study, the sole purpose of research is the discovery of the general principles based on observed relationship between the variables involved in a research study.

The general approach is study a sample and then attempt to generalize the findings there from over a wider population.

In Chapter Four we are to consider a set of observations, where two variables x and y are to be measured. We thereafter decide to measure the type of relationship or association that exist between them, the nature and the magnitude of possible measures of association.

4.1 REGRESSION ANALYSIS

This measurement, thus, is referred to as Regression Analysis and is the determination of the association or relationship that exists between two variables for the purpose of forecasting or making predictions for the future values of the variables under study.

Two types of regression analysis exist but we are concerned with simple linear regressions. And, here again, there are two methods that are used:

- The free-hand-best eye fit, and
- The least square regression line.

The former method is obtained by following these steps:

- Obtain a data summary table.
- Plot the data into scatter diagram, and
- Obtain a line of best fit by using the method of free-hand-best eye fit.

The free-hand-best eye fit is obtained by taking a reasonable straight line through the best-fitted straight point in the scatter plot. This line may not pass through all the points, but it is obtained in such a way that it gives an approximate equal number of points on both sides of the guessed line.

4.1.1 The Least Square Regression Line:

Get the first two steps above ready and then use the mathematical expression, which is the general linear equation to obtain the least regression line. This is again, stated in terms of x and y:

That is, y = a + bx

Where, y = observed value of the dependent variable

x = fixed value of the independent variable

a and b = constants which respectively represent the intercept and slope (or gradient) of the straight line.

4.1.2 Outline of Procedure

Step 1 Label the independent variable x and list subsequent values of x

Step 2 Label the dependent variable y and list subsequent values of y

Step 3 Calculate the mean of the x values $(\bar{x})$ and of the y values $(\bar{y})$

Step 4 Calculate the deviation of each x value from $\bar{x}$ and of each y value from y. List these deviations in separate columns and check that the sum of each column is zero.

Step 5 Calculate the product of columns 3 and 4 (below) for each row and list the results in column 5. Sum the column, that is,

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$$\sum(x - \bar{x})(y - \bar{y})$$

Step 6   Square each entry in column 3 and place the result in column 6. Sum the column, that is, $\sum(x - x)^2$

Step 7   Calculate b, thus $\frac{\sum(x-x)(y-y)}{\sum(x-x)^2}$

Step 8   The linear regression line is defined by $y = \bar{y} + b(x - \bar{x})$ substitute $\bar{y}$, b and $\bar{x}$.

4.1.3   Sample of Column

1	2	3	4	5	6
x	y	$x - \bar{x}$	$y = \bar{y}$	$(x - \bar{x})(y - \bar{y})$	$(x - \bar{x})^2$

In this study $Y_1 = f(x_1)$ as a measure of the impact of interest rate deregulation on savings mobilisation in Nigeria.

$$Y_1 \quad = \quad f(x_1)$$
$$Y_2 \quad = \quad f(x_1)$$
$$Y_3 \quad = \quad f(x_1)$$
$$Y_4 \quad = \quad f(x_1)$$

Where, Y_1 = Minimum Rediscount Rate

Y_2 = Treasury Bill Rate

Y_3 = Time Deposit Rate (6 – 12 months)

Y_4 = Time Deposit Rate (over 12 months)

X_1 = Savings Deposit.

4.1.4   Econometric Model

Variables of interest in our econometric model are:

(a) Independent variable, (x_1)

(b) Dependent variables, Y_1, Y_2, Y_3 and Y_4.

4.2   DATA ANALYSIS

Table below shows the structure of the selected nominal rates of interest on savings deposit in Nigeria for the period specified.

TABLE: SELECTED NOMINAL INTEREST RATES ON SAVINGS IN NIGERIA (%)

YEAR	MINIMUM REDISCOUNT RATE	TREASURY BILL RATE	TIME DEPOSIT (6-12 MONTHS)	TIME DEPOSIT (OVER 12 MONTHS)	SAVINGS DEPOSIT
1997	6.0	5.0	6.25	6.5	5.0
1998	8.0	7.0	8.0	8.25	7.25
1999	8.0	7.0	8.0	8.25	7.25
2000	10.0	8.5	9.25	10.0	9.5
2001	10.0	8.5	9.25	10.0	9.5
2002	10.0	8.5	15.0	15.8	14.0
2003	12.75	11.75	14.50	14.8	12.0
2004	12.75	11.75	20.9	20.9	16.5
2005	18.50	16.38	22.10	23.0	18.80
2006	18.50	17.50	22.10	20.10	14.29
2007	14.50	15.0	23.99	20.50	16.10
2008	17.50	21.0	12.50	28.02	16.66
2009	26.0	26.90	12.50	28.02	16.66

SOURCE: 1. CBN Economic and Financial Review.

2. CBN Annual Report and Statement of Accounts (various years)

The model specified earlier has been estimated with ordinary least squares method of estimation using annual data between 1997 to 2009.

The result of the model is as shown in the regression table below

4.2.1   Regression Data (Table 1) Coefficients

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	p
	B	Std. Error	Beta		
1 (Constant)	1.978	1.648		1.200	0.251
Savings Deposit	0.838	0.122	0.885	6.868	0.000

a. **Dependent Variable: Minimum Rediscount Rate**

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.885[a]	0.784	0.767	1.9286	2.402

a. **Independent Variable: (Constant), Savings Deposit**

b. **Dependent Variable: Minimum Rediscount Rate**

ANOVA[b]

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	175.456	1	175.456	47.173	0.000[a]
Residual	48.352	13	3.719		
Total	223.808	14			

  a. **Independent Variable: (Constant), Savings Deposit**

  b. **Dependent Variable: Minimum Rediscount Rate**

$R^2 = 0.78$ **F(1, 13) = 47.173 (0.00) D.W = 2.402**

Rediscount Rate = 1.978 + 0.838 (Savings Deposit)

Critical T-test

In order to determine the significance of coefficient of independent variable in econometric model, the t-statistics is computed. The result is presented in ordinary bracket in the above equation.

The implication this has on our model is that a relationship exists between rediscount rate and savings deposit and all were significant at 5% critical level.

The deduction that could be made is that rediscount rate is a function of the savings deposit during the period under consideration.

Coefficient of determination (R^2).

To determine the degree of association between the dependent variable and predictors, the R square is computed and the result is as shown above $R^2 = 0.78$. This shows that there exist a great association between the

dependent variable rediscount rate and the independent variable, savings deposit between the period of 1997 and 2009.

Durbin Watson (D-W) Statistics...(i)

In determining the existence of auto-correlation in our model, the Durbin Watson statistics was computed. In the first model's above computation, D-W = 2.402. The indication of this is that there is no auto correlation in our model hence the model is conclusive.

F–Statistics

In order to determine whether there is significant relationship between the dependent variable and the independent variable, the F–statistics was computed. For the first model calculated F=47.173 and $F_{.05} = 3.49$.

Since the F Statistics is greater than $F_{.05}$. We conclude that the independent variable, savings deposit significantly affect the dependent variable, minimum rediscount rate.

4.2.2 Regression Data (Table 2)

Coefficient[a]

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	T	p
2 (Constant)	-1.310	3.315		-0.395	0.699
Savings Deposit	1.098	0.246	0.778	4.472	0.001

a. **Dependent Variable: Treasury Bill Rate**

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
2	0.778[a]	0.606	0.576	3.8792	1.658

a. Independent Variable: (Constant), Savings Deposit

b. Dependent Variable: Treasury Bill Rate

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
2	Regression	300.885	1	300.885	19.994	0.001[a]
	Residual	195.631	13	15.049		
	Total	496.516	14			

a. Independent Variable: (Constant), Savings Deposit

b. Dependent Variable: Treasury Bill Rate

$R^2 = 0.61$ F(1, 13) = 19.994 (0.01) D.W = 1.658

Treasury Bill = -1.310 + 1.098 (Savings Deposit)

Critical T-test

In order to determine the significance of coefficient of independent variable in econometric model, the t-statistics is computed. The result is presented in ordinary bracket in the above equation.

The implication this has on our model is that a relationship exists between treasury bill rate and savings deposit, all were significant at 5% critical level.

The deduction that could be made is that treasury bill rate is a function of the savings deposit during the period under consideration.

Coefficient of determination (R^2).

To determine the degree of association between the dependent variable and predictors, the R square is computed and the result is as shown above $R^2 = 0.61$. This shows that there exist a great association between the dependent variable treasury bill rate and the independent variable, savings deposit between the period of 1997 and 2009.

Durbin Watson (D-W) Statistics..(ii)

In determining the existence of auto-correlation in our model, the Durbin Watson statistics was computed. In the 2^{nd} model's above computation, D-W = 1.658. The indication of this is that there is no auto correlation in our model hence the model is conclusive.

F–Statistics

In order to determine whether there is significant relationship between the dependent variable and the independent variable, the F–statistics was computed. For the 2^{nd} model calculated F=19.994 and $F_{.05} = 3.49$.

Since the F Statistics is greater than $F_{.05}$ we conclude that the independent variable, savings deposit significantly affect the dependent variable, treasury bill rate.

4.2.3 Regression Data (Table 3)

Coefficient[a]

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	p
3 (Constant)	-1.300	2.512		-0.518	0.613
Savings Deposit	1.254	0.186	0.882	6.737	0.000

a. Dependent Variable: Time Deposit (6-12 months)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
3	0.882[a]	0.777	0.760	2.9394	1.596

a. Independent Variable: (Constant), Savings Deposit

b. Dependent Variable: Time Deposit (6-12months)

ANOVA[b]

Model	Sum of Squares	df	Mean Square	F	Sig.
3 Regression	392.138	1	392.138	45.385	0.000[a]
Residual	112.323	13	8.640		
Total	504.461	14			

a. Independent Variable: (Constant), Savings Deposit

b. Dependent Variable: Time Deposit (6-12 months)

$R^2 = 0.78$ F $(1, 13) = 45.385$ (0.001) D.W = 1.595

Time Deposit (6-12 months) = -1.300 + 1.254 (Savings Deposit)

Critical T-test

In order to determine the significance of coefficient of independent variable in econometric model, the t-statistics is computed. The result is presented in ordinary bracket in the above equation.

The implication this has on our model is that a relationship exists between time deposit rate and savings deposit and all were significant at 5% critical level.

The deduction that could be made is that time deposit rate is a function of the savings deposit during the period under consideration.

Coefficient of determination (R^2).

To determine the degree of association between the dependent variable and predictors, the R square is computed and the result is as shown above $R^2 = 0.78$. This shows that there exist a great association between the dependent variable, time deposit rate and the independent variable, savings deposit between the period of 1997 and 2009.

Durbin Watson (D-W) Statistics...(iii)

In determining the existence of auto-correlation in our model, the Durbin Watson statistics was computed. In the 3[rd] model's above computation, D-W = 1.595. The indication of this is that there is auto correlation in our model hence the model is not conclusive.

F–Statistics

In order to determine whether there is significant relationship between the dependent variable and the independent variable, the F–Statistics was computed. For the 3[rd] model calculated F=45.385 and $F_{.05} = 3.49$.

Since the F-Statistics is greater than $F_{.05}$ we conclude that the independent variable, savings deposit significantly affect the dependent variables, time deposit rate.

4.2.4 Regression Data (Table 4)

Coefficient[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	p
	B	Std. Error	Beta		
4 (Constant)	-3.093	2.454		-1.260	0.230
Savings Deposit	1.521	0.182	0.918	8.364	0.000

b. Dependent Variable: Time Deposit (over 12 months)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
4	0.918[a]	0.843	0.831	2.8724	1.372

c. Independent Variable: (Constant), Savings Deposit

d. Dependent Variable: Time Deposit (over 12months)

ANOVA[b]

Model	Sum of Squares	df	Mean Square	F	Sig.
4 Regression	577.227	1	577.227	69.960	0.000[a]
Residual	107.260	13	8.251		
Total	684.487	14			

c. Predictors: (Constant), Savings Deposit

d. Dependent Variable: Time Deposit (over 12 months)

$R^2 = 0.84$ F (1, 13) = 69.960 (0.00) D.W = 1.372

Time Deposit (over 12 months) = -3.093 + 1.521 (Savings Deposit)

Critical T-test

In order to determine the significance of coefficient of independent variable in econometric model, the t-statistics is computed. The result is presented in ordinary bracket in the above equation.

The implication this has on our model is that a relationship exists between time deposit rate (Over 12 months) and savings deposit and all were significant at 5% critical level.

The deduction that could be made is that time deposit rate (Over 12 months) is a function of the savings deposit during the period under consideration.

Coefficient of determination (R^2).

To determine the degree of association between the dependent variable and predictors, the R square is computed and the result is as shown above $R^2 = 0.84$. This shows that there exist a great association between the dependent variable, time deposit rate and the independent variable, savings deposit between the period of 1997 and 2009.

Durbin Watson (D-W) Statistics...(iv)

In determining the existence of auto-correlation in our model, the Durbin Watson statistics was computed. In the 4[th] model's above computation, D-

W = 1.372. The indication of this is that there is auto correlation in our model hence the model is not conclusive.

F–Statistics

In order to determine whether there is significant relationship between the dependent variable and the independent variable, the F–Statistics was computed. For the 4^{th} model calculated F=69.960 and

$F_{.05} = 3.49$.

Since the F-Statistics is greater than $F_{.05}$ we conclude that the independent variable, savings deposit significantly affect the dependent variable, time deposit rate (Over 12 months).

CHAPTER FIVE

5.0 DISCUSSION OF RESULTS

The objective of this research project is to ascertain the impact of interest rate deregulation on savings mobilisation in Nigeria and its linkage effect on investment and hence economic development since the adoption of the Structural Adjustment Programme (SAP) in 1986.

5.1 Research Findings

Model 1   (a) Independent Variable: Savings Deposit

(b) Dependent Variable: Minimum Rediscount Rate

    (i)   Relationship between both variables confirmed

    (ii)   Rediscount rate as a function of savings deposit proven

    (iii) Great association between both variables evident

    (iv)   No auto-correlation, hence the model is conclusive

Conclusion: Savings deposit is significantly affected by Minimum Rediscount Rate (MRR)

Model 2   (a) Independent Variable: Savings Deposit

(b) Dependent Variable: Treasury Bill Rate

    (i)   Relationship between both variables confirmed

    (ii)   Treasury bill rate as a function of savings deposit proven.

    (iii) Great association between both variables evident

    (iv)   No auto-correlation, hence the model is conclusive.

Conclusion:	Savings deposit is significantly affected by Treasury Bill Rate.

Model 3   (a) Independent Variable: Savings Deposits

(b) Dependent Variable: Time Deposits Rate (6–12 months)

    (i)   Relationship between both variables confirmed

    (ii)   Time deposit rate (6–12 months) as a function of savings deposit proven

    (iii)   Great association between both variables evident.

    (iv)   Auto-correlation indicated, hence our model is inconclusive.

Conclusion: Savings deposit is significantly affected by the Time Deposit Rate (6-12 months)

Model 4   (a) Independent Variable: Savings Deposit

(b) Dependent Variable: Time Deposit Rate (over 12 months)

    (i)   Relationship between variables confirmed

    (ii)   Time deposit rate (over 12 months) as a function of savings deposit proven

    (iii)   Great association between both variables evident

    (iv)   Auto-correlation indicated, hence our model is inconclusive.

Conclusion: Savings deposit is significantly affected by Time Deposits Rate (over 12 months).

The results of the data analysis as the four econometric models posit show that savings mobilisation is significantly affected by interest rate changes. These changes are in response to market forces which is the essence of liberalisation programme.

That Durbin Watson (D-W) statistics could confirm auto-correlation in models 3 and 4 is not totally inconsequential. Although the results are not too far from being negatively correlated, (see the figures below). The real import of this finding is that the maturity structure of the savings mobilization did not record the level improvement anticipated due partly to the fact that investors seems to be more favourably disposed to short-term maturity deposits.

Model	1	(D-W) statistics	=	2.402
√	2	√	=	1.658
√	3	√	=	1.595
√	4	√	=	1.372

5.2 Existing Knowledge and Views

One of the most serious assertions about insignificance of interest rate on savings was made by Shackle in 1965 and states that: "It has been admitted from Marshall's time at least that the influence of the interest rate on saving is doubtful even as to its algebraic sign". Notably, Alfred Marshall (1842 – 1924) reputedly occupied the heights of the late Victorian economics to the end of World War I. And, barely a year later in 1966 Balogh claimed that: "An increase in the rate of interest, according to historical experience, does not seem to have an influence on rate of savings".

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In Nigeria, studies relating interest rates to savings still remain largely in unsettling controversy. Some research studies notably: Oyejide (1972:18), Teriba (1974:11) Ajayi (1978:55), Lambo (1986:7), Ajayi and Ojo (1986:213) and Ajewole (1989:9) all concluded that interest rate is an insignificant factor on savings mobilisation.

At the other end, Oworekun (1988:16) using almost the same variables and data source employed above disagrees and concludes that interest rate is significant.

The controversy heightened with more conflicting reports as studies by Okigho (1981:58), Oyeyide (1998:9) twenty years after his first study in 1972, and Teriba (2002:21) 28 years after his first research study in 1974; all returned a verdict of the insignificance of interest rate on savings.

Strikingly enough, others like Owesekun (1978:37) and Ikhide (1990:33) however, argue that interest rate is a significant factor influencing savings in Nigeria.

McKinnon and Shaw (1973:62) and McKinnon (1988:51-72) postulated that interest rates have a positive response to savings and economic growth with investment serving as the link.

Empirical studies carried out in the United States of America (USA) by Wright (1969:44), Blonder (1975:67) Boskin (1978:81) and Gylfason (2006:45) on the effect of increase in interest rates on savings, confirmed the positive effect of increase in interest rate on savings.

These counterpart views from far west are not without controversy. There remains conflicting evidence as to the effect of interest rate on savings.

Studies by Friend (1983:39), Thornton (1991:5) and Evans (2007:32) have all their results showing little or no interest elasticity for savings.

In far east, the comparative evaluation by J.G. Williamson of some of the major determinants of personal savings in Asia, lead to the more difficult question of interest elasticity of personal savings in Asia. His declaration is that "higher interest rates are associated, if anything, with lower real saving in Asia". The explanation would appear to lie in the fact that the savings and investment decisions are highly interdependent in the Asian household sector... interest rates appear to influence the short-run savings decision far more powerfully than the long-run savings decision. One of the findings of the Williamson's study was that for Asia the net impact of real interest rate movements on personal saving was either negative or insignificant.

However, another regression analysis by K. L. Gupta using the same variables used in Williamson's study but a different and more reliable set of primary data on savings for India (estimates by the Reserve Bank of India instead of the National Council of Applied Economics Research) arrived at results just the opposite of Williamson's!

The highlight of Gupta's result is that while the real rate of interest is not significant at the aggregate level, it is more influential in determining personal savings at the per capita level.

In Korea: The effectiveness of high interest rate structure in stimulating saving is shown by the spectacular rise in monetary saving (123 per cent after just one year of liberalisation). The bulk of the increase in time and savings deposit during 1964-68 was accounted for by the household sector.

The presumption of interest sensibility of household savings in a multiple regression analysis by Kwang Suk Kim showed a strong correlation between the real deposit rate of interest and the savings of the household sector as well as between gross private saving and gross domestic saving.

In Argentina: The effects of interest rate liberalisation whereby interest rates were allowed to rise to remunerate savers adequately for the effects of inflation, deposits rose rapidly in response which doubled in 1981 from 1976 when liberalisation started.

Finally, in studies carried out by International Monetary Fund IMF (1983:113) there is evidence from the experience of a number of countries (including Ghana) that the real return on deposits has a significant effect on the volume of mobilized institutional savings.

Although Nigeria is the sole area of interest, knowledge and views could not be restricted as this would appear too localised. It serves better purpose to contextualise these contradictions in a global perspective.

5.3   ANSWERS

(a) The findings of this study are not consistent with existing knowledge and views in its entirety.

(b) The findings, therefore, are different to certain extent.

They are different because existing knowledge and views are contradictory studies of eminent authors. At one end are the likes of Shackle, Balogh, Oyejide, Teriba, Ajayi and Lambo, Ajewole, Evans, Friend, Thornton, Okigho and so on whose views show that

the influence of the interest rate changes on saving is either doubtful or outrightly insignificant.

In trying to make their case strong, Oyejide and Teriba after a span of 20 and 28 years respectively repeated their studies and arrived at the same conclusions confirming the insignificance of interest rate changes in savings.

At the other end of the argument are the likes of Owesekun, Oworekun, Ikhide, McKinnon and Shaw, Wright, Blonder, Boksin, Gylfason and so on disagree by affirming positive effect of interest rate changes on savings mobilisation.

These polarised views have, therefore, persisted on this thorny issue of perceived role of interest rate on savings. Hence, the need for detailed analysis or empirical investigation.

This study has examined the impact of interest rate deregulation on savings mobilisation in Nigeria. Fortunately, the study has shown that changes in interest rate does have significant effect on savings mobilisation. In other words, the study or findings are consistent with knowledge and views of the second group of authors.

(c) No new findings (as such) arose in the course of this investigation. However, the fact of something interesting or pleasant happening by chance could not be denied.

This study has shown from Keynes Theory that investment is determined by the marginal efficiency of capital. And, the rate of

interest influences the marginal efficiency because it reflects the opportunity cost of invested funds.

In a free market economy, savings are automatically matched with investment. Generally, when interest rates rise, people will save more. When interest rates fall, more potential projects become economic, so businesses and entrepreneurs invest more. In a free market, interest rates rise and fall to clear the market and ensure that savings are matched by equivalent investments.

Evidently, artificially low interest rates cause dislocation in the economy. Households respond by reducing saving and increasing consumption. Investment goods thereby decline as a consequence.

It has also been noted that savings precede investment, and investment precede employment and by extension well-being of individuals or nation in general. This syllogism, therefore, endorses the view that savings do lead to economic development or real development of the nation.

This serendipity, so to speak, has been buttressed by views expressed by McKinnon and Shaw, once more, who postulated that interest rates have a positive response to savings and economic growth with investment serving as the link.

(d)   **Proof of Hypotheses**

Null hypothesis statement is:

"Interest rate deregulation in Nigeria has no significant impact on savings, investment and general economic development."

Alternative hypothesis is:

"Interest rate deregulation in Nigeria has significant impact on savings, investment and general economic development."

This study has proved the alternative hypothesis only to the extent of positive impact on savings. However, impact on investment and general economic development is not proven. In other words, mixed.

CHAPTER SIX

6.0   FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

6.1   SUMMARY OF FINDINGS

This study looked at the impact of savings mobilization in Nigeria with specific emphasis on interest rate deregulation as fallout of the Structural Adjustment Programme. It has been undertaken to shed more light on how interest rate policy can influence and affect domestic resource mobilization, investment and hence growth of the economy.

Thus the following are the findings of the study in no particular order.

First, very broad comprehensive financial reform policies were adopted in Nigeria. The sequencing and speed of which can make or mar its success.

The deregulation policies led to some improvements in financial development like increase in the number and varieties of financial institutions, development of new products and services as well as innovations in process and banking operations. However, the study reveals that only a few banks hold substantial share of the market.

Also, the deregulation of the interest rate structure led to increase in savings. However, the maturity structure of the savings mobilization did not improve significantly, due to the fact that it is mainly short-term in nature. In other words, long-term savings were not too favourable to investors and reflect the level of confidence and trust prevailing in the banking sub-sector.

It is also observed that there was substantial growth in the activities of the informal financial sector, particularly in relation to the number and amount of deposits mobilized as well as the number of loan requested and the amount of loans granted Soyibo (1996$_c$). This was as a result of the fact that the private sector, particularly SMEs, agricultural enterprises and rural dwellers access to credit were improved.

Although study revealed that the banking deregulation improved the real interest rate, but it did not lead to significant financial deepening.

The programme also led to some improvement in credit granted to the private sector vis-a-vis government. However, the deregulation also brought with it the high cost of funds. Therefore, the private sector's access to bank credit for investment dwindled. This is reflected in the average growth rate of the gross domestic investment becoming discouraging during the period of reforms.

On the whole, it was found that the impact of deregulation programme is mixed. The study shows that macroeconomic instability created by fiscal deficits financed by money creation and tax constitutes a major source of impediment for its successful implementation in Nigeria. Also, there is the problem of policy inconsistency or more appropriately the prevalence of the notorious "Nigerian factor".

Secondly, it also appears that not much have been done in coping with and improving the required institutional, managerial and human capital capacity needed for the successful implementation of the programme by both the banks and the supervisory and regulatory authorities despite the introduction of prudential regulations.

Evidently, Nigeria's experimentation with macroeconomic and structural reforms had lacked the essential ingredients required to successfully run a free market economy. Without monetary and fiscal discipline and an indigenous productive base, the environment for interest rate deregulation and a general application of free market principles is significantly disabling.

Thirdly, it has been a macroeconomic policy blunder to juxtapose excessive monetary restraint with profligate fiscal expansion. The effect, as always has been, that while productive sectors chocked, non-productive activities boomed. In making matters worse, lack of a compensating fiscal prudence and high external dependence remain a stumbling block in the interest rate deregulation.

Since the interest rate policy was significantly undermined by government fiscal misconduct, a somewhat departure from discipline required under deregulatory regime. The policy of interest rate deregulation therefore appears threatened.

Nigeria is home to unstable policies. So, our leaders had better realise that when uncertainties becomes stable, every other thing becomes unstable! Or else, there would be no respite in sight to our volatile economy that has continued to suffer from feverish uncertainties. In other words, we seem to be permanently unorganised and permanently unorganisable.

Findings also include the experience of Malaysia and Singapore which show that price stability is in itself a major factor in sustaining an ideal climate for encouraging financial savings and to that extent the role of interest rate in an overall savings strategy.

Furthermore, the contrasting experience of Taiwan and Korea on the one hand, and of Malaysia and Singapore, on the other hand, is a salutary reminder of the dangers of dogmatic generalisations on interest rate policies that will need to be tailored to specific situations in conjunction with appropriate price and income policies.

In general, Nigeria's financial system with the banking sub-sector as arrowhead, inspite of reforms, are still riddled with lapses, abuses, lax accounting and reporting standards as well as competency gaps. With globalisation and its connotations, the danger posed by these short-comings is ever present in its ominousness.

Due to interconnectivity of world economics, our financial system therefore, is not insulated from international developments. Result being the grand swell in international calls for articulating how best to checkmate the effects of local markets on the conduct of international commerce. The surprise emergence of Asian tigers and the like as major countries in global business and finance accelerates these calls. Efficient regulation of local markets is the strongest signal that sovereignties can put forward to the international community that local markets are prepared to be part of the global chain of commerce, hence the importance of a systemic risk regulator and a systemic risk council.

The call for a Systemic Risk Regulator is a call for the establishment of a neutral entity responsible for monitoring the Nigerian financial system and markets for system-wide risks. This is not a call for an enhanced institutional regulation or a substitution for the work performed by the CBN and the NDIC for Banks, the SEC for companies listed on the

exchanges or those that come to the market to source funds, but a government establishment, specifically designed as a hedge against risks, headed by a Regulator, with a Council of Systemic Risk Oversight Board.

The two types of systemic risks that need a regulator's intervention are the risk of sudden and near term systemic freeze or cascading market failures, and the longer term risk that will intentionally favour large systemically important institutions over smaller competitors. Smaller and more nimble companies are the back bones of innovations in the market and drivers of market efficiencies; and should be protected.

A market systemic risk regulator must be so guided that attempts at protecting the market against near term seizures do not result in a long term systemic imbalances that are disfavourable. This regulation go beyond traditional oversight functions, market transparency and enforcement provided by primary institutional regulators. It includes macro prudential regulations designed to identify and minimize those risks whenever they exist.

It is only through effective understanding of structural imbalances in the market that systemic risk factors can be checkmated. A Nigerian Systemic Risk Regulator and Systemic Risk Oversight Council could have the potential of expanding the various institutional market avenues in the country. The inability of the banking sector to penetrate the Nigeria financial markets with sufficient resources necessary for private sector led business and economic expansions for example, can be best addressed by the mode of regulation being canvassed.

Moreso, an economy in a state of dysfunction such as ours, its financial system cannot afford to head to a tailspin. Hence, all should be put in place to restore the perception and confidence of the general public.

6.2   CONCLUSIONS

This study has dealt extensively with the problems of identifying the perceived role of interest rate in Nigeria. Investigations were also made in order to discover the effect, if any and impact of deregulating the interest rate on the amount of domestic savings mobilized, including both public and private. Efforts were also made in testing the validity of the hypothesis of the study that financial conditions, especially deregulation do matter in savings behaviour in Nigeria with its linkage effects to investment and growth of the Nigerian economy.

Amid cloudy horizon for the economy occasioned by macroeconomic inconsistencies and surveillance failure, stricter control and regulation of the financial system especially the banking sub-sector are justified to sustain public trust as well as other concerns that bank failures would disrupt the rest of the economy which through contagion effect other businesses collapse.

Unless there is a modicum of sanity in the financial sector of the economy, envisaged savings mobilisation will be a mirage. And, since reforms merely drove the economy into protraction, concrete steps are required to strengthen the entire institutional and financial system. The study therefore shows that the reforms involved have generally been both comprehensive and costly with mixed results.

Based on the above, the general conclusion of this study is that the deregulation of the interest rates has impact on savings, with minuscular effect on investment, economic growth and development in Nigeria. While it has a positive impact on savings mobilized, efforts are still needed in converting it into meaningful investment through good governance.

6.3 RECOMMENDATIONS

One of the core intent of this research study is to advance recommendations that will directly or indirectly enhance savings mobilisation as well as the systems for effective and sustainable institutional and financial reforms in Nigeria. And to serve this purpose, they have been explicitly and lucidly laid to convey appropriate information.

6.3.1 The Case for a Systemic Risk Council in Nigeria

The Systemic Risk Regulator's mandate must include defending shareholders and investors and the Regulator should have power and access to information across all our financial markets and should be able to call to national attention, lapses within existing regulatory agencies, and or baneful or corrupt practices capable of causing loss of confidence in the Nigerian financial system and seek immediate remedies and correlations. These include monitoring institutional compliance with capital ratio levels, liquidity requirements, enterprise wide unwholesome business activities (fraud), etc. As the market's early warning system, the Systemic Risk Regulator should have an oversight Council that it reports its findings to. Hence, Systemic Risk Council of Nigeria.

Such council should comprise of institutions and segments of the market, existing regulatory agencies and industry specific regulators. A Systemic Risk Council or Board with the power to identify emerging market risks should have the power to swiftly address such problems by minimizing regulatory arbitrage. The Council or Board have the added advantage of a multi-disciplinary group of market experts with responsibilities that extends beyond expertise in financial markets or a single institution.

6.3.2   Interest Rate Strategy

A good interest rate strategy would always ensure that the rise in the deposit rates is not communicated to loan rates as this would harm commercial capital requirements of the economy.

In practice, the strategy ensures a "ceiling" on loan rates as well as a "floor" for deposit rates. However, the progressive raising of rates on deposits without a corresponding increase in loan rates is bound to create an 'inverted' interest rate structure with a negative differential deposit and loan rates. Since the former were raised to higher levels than the later.

To mitigate this situation a 'redeposit facility' would be created whereby banks would have the option of placing excess deposit (i.e. those for which they had no immediate outlet by way of investment or loan) in the Central Bank of Nigeria (CBN) at rates equal to or above those paid by the commercial banks. Thus, in effect, would protect the commercial banks against losses on the preferential deposits.

The kernel of this strategy is an appropriate overall interest rate policy for a less developed country like Nigeria that will have to be based on a

delicate balancing of rates realistic enough to stimulate saving but not so high as to inhibit investment in desired channels.

Relatedly speaking, for maturity structure of savings mobilization to improve realistically, package of appropriate considerations would need to be applied. And, these are: first, incentives (enhanced interest rates) on long-term savings deposit (12 months and above). Second, maintaining soundness of the banks as entities.

6.3.3   Other Macroeconomic Issues

Having tested deregulatory measures as well as the control regime, the emerging indication is that while administrative controls constitute an inappropriate means of stimulating the private sector, market forces need to be guided and directed. In this circumstance, the credibility of macroeconomic policy cannot be assessed on the basis of the ideological extremities of the free market mechanism and administrative controls. While the market mechanism is admittedly superior to state controls in resource pricing and allocation the established production-consumption characteristics of the economy constitute a major constraint to running a pure market economy. A middle course should therefore be followed in macroeconomic policy matters, bringing the market mechanism in matters that are best decided by the markets and the state in circumstances where the market forces need to be guided and directed.

A balanced approach to economic policy formulation should be adopted which should be liberal enough to permit an expanded role for the private sector but limited by an improved quality of state intervention. Government should no longer relent in addressing the devastating issue of

fiscal deficits which has been identified as the economy's central trouble spot.

This approach would ensure that the state and the markets are complementary and re-enforcing in their functions and provide checks and balances that curb the excesses of each.

Such a macroeconomic framework would ensure that decisions that should originate from the markets are not imposed by fiat while at the same time, the markets are guided towards the desired goals.

A balanced approach to macroeconomics policy should therefore be adopted that combines the virtues of the state and the market but minimises the vices of each. In other words, Nigerian realities rather than economic orthodoxy should be the test.

6.3.4   The Banking Sub-sector

The need for the banking deregulation to have the desired impact on economic growth, certain recommendations need to be made and thus implemented. This study has therefore led to some important policy recommendations:

- The introduction of the policy of deregulation of the financial sector generally and the deregulation of interest rates in particular, should be commended, but still requires other certain complementary policies for its desired effects to be felt.
- That, macroeconomic stability should be promoted in order to ensure the efficiency of the financial system.

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- There is need for flexibility and discretion and gradual liberalization of the interest rates in order to perform its dual role as both a return on investment and cost of investment.

- Also, adequate and appropriate consideration should be given to the management of possible distress in the financial system.

- That effort must be made to ensure policy credibility and policy consistency by the appropriate regulatory and supervisory authorities. Therefore, government should endeavour to stick to its policy, even when it involves taking some important but unpleasant decisions such as allowing government-owned interests to go under.

6.3.5   Stress Testing Framework for Banks

Since the start of the global financial crisis, stress testing has received increased attention by regulators, rating agents, bank management, etc. Stress testing is not new. It has been a very important tool in the arsenal of risk management for many years. Few banks, internationally, however, have managed to implement effective stress testing systems in the past. The reasons for this are lack of data, complexity and quantitative models capability required and inability to integrate the results of stress testing with the risk management decision process.

Stress testing is the process of:

(a) Defining potential extreme adverse future economic scenarios.

(b) Measuring the sensitivity of the bank's credit, market, investment and operational risk portfolios to changes in economic variables resulted under extreme scenarios defined under (a).

(c) Aggregating the results of (b) and quantifying the overall negative impact on planned profitability, capital levels, liquidity position, etc.

(d) Comparing the results of (c) to board approved risk appetite levels and implementing risk reduction business strategies, policy changes, etc. should the results of the stress test exceed risk appetite.

Step (d) is the most important in implementing an effective stress testing framework. During the just abating global financial crisis, many international banks ran into trouble because their stress testing frameworks omitted this important step. Their stress testing frameworks were thus largely theoretical. Although, the risk management functions built sophisticated models to quantify potential stress scenario losses. However, senior management failed to adjust their risk taking strategies and risk appetites based on the stress testing results and continued to do business as usual in the hope that the stress scenario will never realize. As we now know, extreme scenarios have a habit of occurring more frequently than popular belief and caused these banks to be bailed out.

One consequence of the global financial crisis will be an increased focus on robust stress testing systems by regulators, rating agents and bank analysts. This will be even more pertinent in Nigeria and other frontier economies where adverse economic scenarios typically affect all economic variables negatively. That is, real economic growth, stock market, asset prices, currency, interest rates, inflation, etc. Whereas, in developed economies, inflation and interest rates typically decline during adverse

times, cushioning the negative impact on asset prices and economic growth.

6.3.6   Challenges and Methodology

The first and foremost challenge in implementing stress testing is the lack of historical data to measure the impact of extreme stress events. The problem is that most banks do not have historical data going back to say, to the 1930s or even the early seventies when we experienced; global financial crisis of similar proportions. Even if they have this data, it is highly unlikely that the data will be usable as their risk portfolio mix, risk acceptance criteria, loan terms and conditions, etc. in all likelihood would have changed significantly since the previous extreme adverse scenario (where applicable). The magnitude of stress losses are largely determined by portfolio characteristics and will thus differ even if a similar extreme economic scenario occur, as we experienced in the past.

One solution is to try and forecast extreme adverse economic scenarios and measure their impact on bank risk portfolios. Bank economists, however, are not good at this. It is human nature in judgmental forecasting to extrapolate from current economic conditions. If bank economists were effective in forecasting the severity of economic decline we have seen in recent times, few banks would have taken the kind of risk they had been taking!

Economists will typically adjust their views too late. For stress testing to be effective, stress scenarios have to be representative of the actual extreme conditions when they occur. It is thus important that subjectivity be eliminated to achieve robust stress testing results.

To address the data availability challenge and ensure objectivity and robustness in extreme stress testing, we have to turn to statistics. Loss distributions are statistical constructs that enable us to derive the size of extreme, high severity low frequency losses from frequently observable normal condition expected losses. We know from internationally available historical loss data that market risk portfolios exhibit systemic or bell-shaped loss distributions. Credit portfolios on the other hand typically have asymmetrical, skewed loss distributions with fat tails.

If it is possible to have recent data on loan delinquencies, collateral value, recovery rates, operational losses, market volatility, etc. arising from normal economic conditions, we can plug these parameters into formulae that will calculate portfolio losses that can be expected under normal conditions. In addition, using formulae that describe the statistical loss distribution, we can derive loss estimates under economic scenarios so extreme that they should occur, for example, only once in 100 years, and so on.

Using any model we can introduce model risk. That is, there is a risk that the actual loss distribution (if we had all the data) will be more skewed than the assumed statistical loss distribution shape. We eliminate this risk by using stressed parameters instead of observed parameters. For example, if we observe a 3 per cent loan or even 3 per cent savings redemption default rate and so on, we will use a stressed default rate of 5 per cent in the calculation. Recent financial crisis related losses suggest that normal condition parameters should be stressed by at least 40 per cent to account for the severity of similar crisis.

Based on the shape of the distribution, the extreme loss would be a multiple of the normal condition expected loss. This multiple is a function of the inherent risk of the portfolio. For low risk portfolios – e.g. investment grade corporate lending, the multiple can be around 6 times. For high risk portfolios – e.g. sub-prime mortgages, the multiple can be over 20 times. This multiple is used to derive stress loss levels.

6.3.7 Top-down Vs Bottom-up Stress Testing

Bottom-up stress testing refers to a stress testing process where the stress loss impact is measured on each and every loan contract, trading or investment position, operational process etc. taking into account the specific terms and conditions of the financial contract. All parties involved in this task must beware of trap of sentiment. For example, the potential loss stress impact of a 20 per cent decline in house prices will be much less severe on a mortgage with 50 per cent LTV, monthly principal and interest repayments and remaining tenure of 10 years than on a mortgage with 80 per cent LTV, interest only repayments and remaining tenure of 20 years.

Top-down stress testing is a simplified approach where stress testing is done at the portfolio and not individual account level and an implicit assumption is made that the risk characteristics of each and every account in the portfolio is the same.

6.3.8 Sound Knowledge

It is also recommended that bank executives should be sound in financial knowledge. Why? Regulators (in the U.S.) recently admitted that they erroneously applied top-down stress testing to banks' balance sheets in

assessing capital adequacy under extreme scenarios in the past, thus failing to differentiate solvency risk among banks sufficiently. As the global crisis has demonstrated, banks that invested in the same products, engaged in the same type of lending and who had similar balance sheet structures experienced widely different loss levels under the same economic and systemic conditions. Why? Because of differences in risk acceptance criteria, risk management policies, loan terms and conditions, etc. The devil of risk is in the detail.

There is also a serious concern that certain international investment analysts covering Nigerian banks are performing top-down stress tests and table the results in their research reports, ostensibly in response to lack of Central Bank of Nigeria lead in this regard. The CBN should therefore wake from its complacency and rise to the occasion. Whilst we welcome indept research of Nigerian banks, the results of top-down stress tests can be misleading and grossly inaccurate as they ignore the details that will determine the size of potential losses, should stress scenarios occur. Investment analysts should rather assess the adequacy of bank's own bottom-up stress testing frameworks and then rely on the results of these if frameworks are robust enough, instead of trying to perform their own stress testing with inadequate information.

6.3.9   CBN to Play Lead Role

Confidence in the system will be improved if the CBN takes the lead on stress testing and report stress testing results, similar to what the U.S. Federal Reserve is doing. If this is not done, we will see analysts continuing to make their own unfounded deductions about the system's

ability to withstand shock, thereby expose our fragile economy to vulnerabilities.

Stress testing is an absolutely must have tool in the modern risk management practices of banks. Whilst data and other challenges exist in applying stress testing, solutions can be deployed to overcome these as was evident in the UBA example. All Nigerian banks will have to wake up to this reality and align with international best practices in this regard. Given the lack of confidence in the local banking system, due to the margin lending issue, currency crisis, etc. if the CBN should play a lead role in applying industry-wide stress tests to assure banks are adequately capitalized and confidence is restored fully. Regrettably, it is sad to see that Nigerian bank's share prices are still languishing at their lows whilst international bank's share prices have increased by 300 – 400 per cent from their recent lows. The industry can contribute to allay the investor's fears by adopting these recommendations. In other words, enthroning pro-active stress testing practices.

6.4   Governance Issues

Governance – which remains a sensitive and misunderstood topic – is now being given a higher priority in development circles.

We define governance as the traditions and institutions by which authority in a country is exercised for the common good. Whereas, on the other hand, corruption is defined more narrowly as the "abuse of public office for private gain".

It is an indisputable fact that for savings at all levels to translate to investment and general economic development; good governance is the key... Unless there are improvements in capacity, accountability and reducing corruption... other reforms will have only limited impact.

This study is a passionate advocacy for savings and investment and a reminder that governments' primary responsibilities include making the environment investor – friendly. Investment leads to industrialisation which is one of the most important steps towards the attainment of lasting economic prosperity.

6.5   Savings and Investment Culture

A book I read many years ago entitled: *The Richest Man in Babylon* changed my attitude to savings and investment. I recommend it to everyone. It's a 30-minute read but it can be life changing. We must encourage the development of a savings and investment culture and persuade our people to buy into it. We must teach them the various options that are available to them. Since no country has attained development without the widespread practice of savings and investment. We must also learn to place value on the culture of savings and investment.

6.6   SUGGESTIONS FOR FURTHER STUDIES

There is also the need to suggest further areas of research due to the fact that studies of financial liberalisation and its impact are inconclusive to some extent. Thus, further research is required to address the issue of the design and optimal sequencing of the financial sector reforms that is appropriate for Nigeria. Also is the determination of appropriate

institutional framework in the country which can cope with the challenges of modern banking and financial developments.

Other further studies relating to the analysis of interest rate structure and its improvements, the transmission of savings to investment, the relationship between gross domestic investment and growth during liberalisation and the building of relevant and appropriate institutional, human and managerial capacity of banks, as well as other agencies required for successful deregulation programme in Nigeria are also recommended.
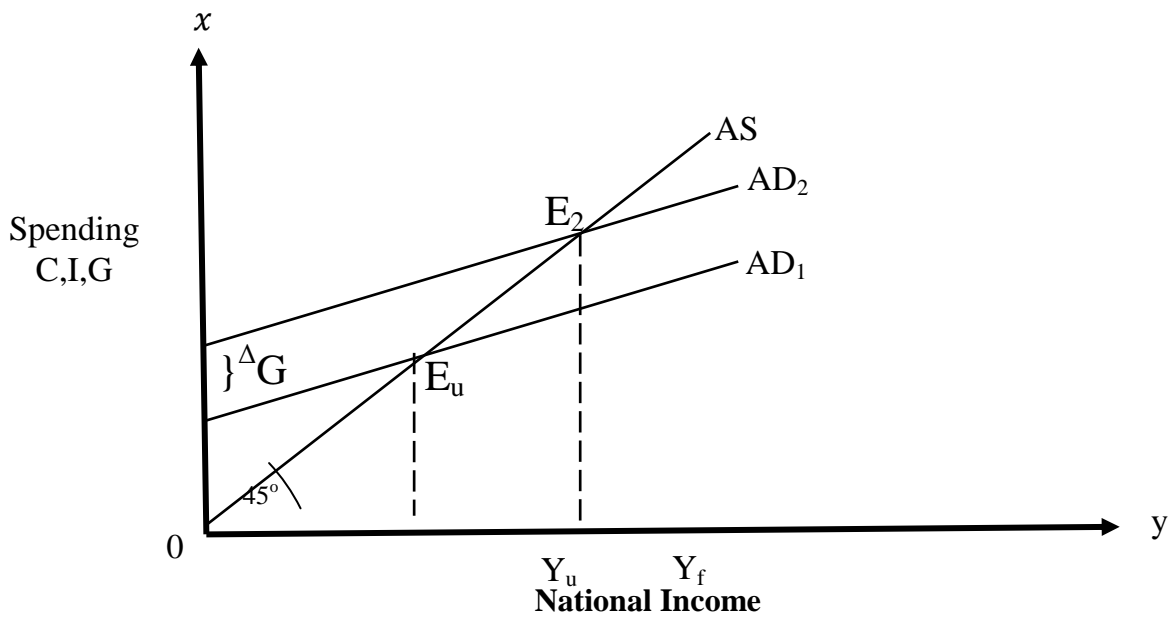
TABLE 2 - 1

A traditional AD – AS Diagram

TABLE 2 - 2
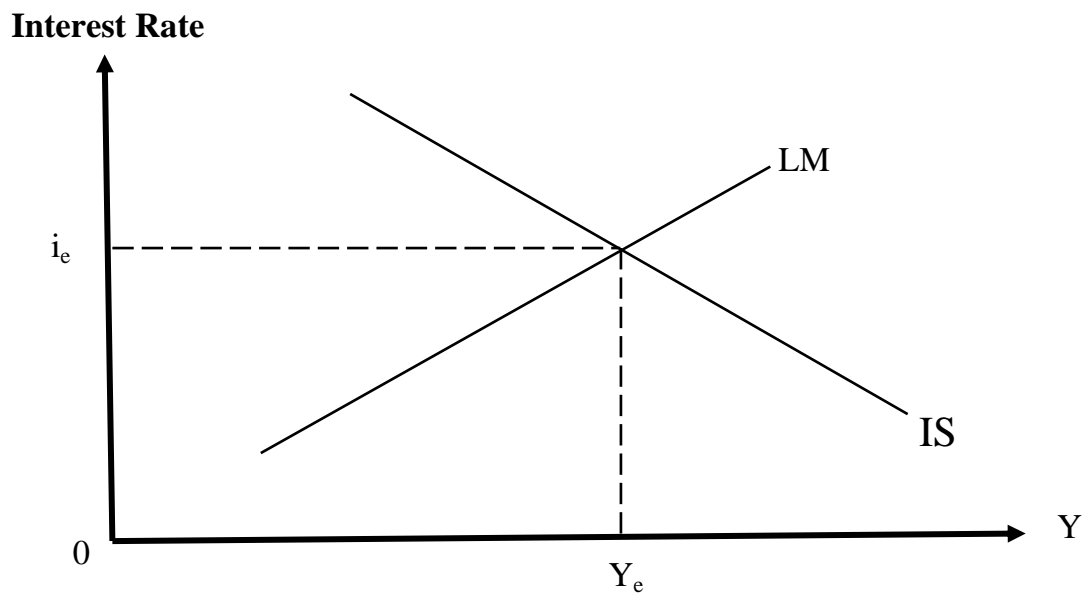
The General Equilibrium of the Product and Money Markets

TABLE 2 - 3
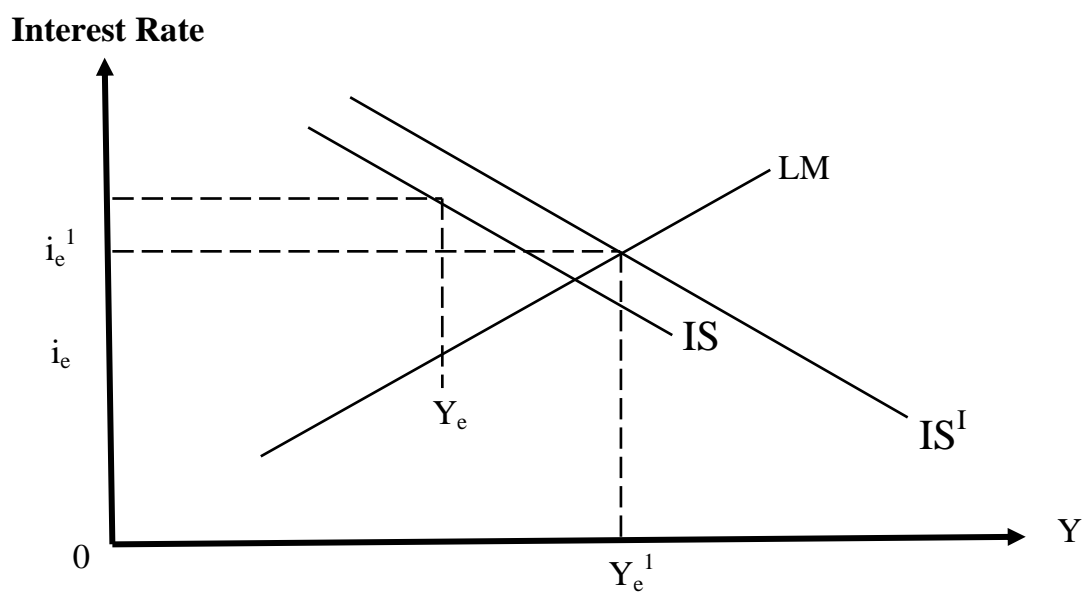
Shifts in the IS Curve and Implications for the Equilibrium Income and Interest Rate

TABLE 2 – 3.1
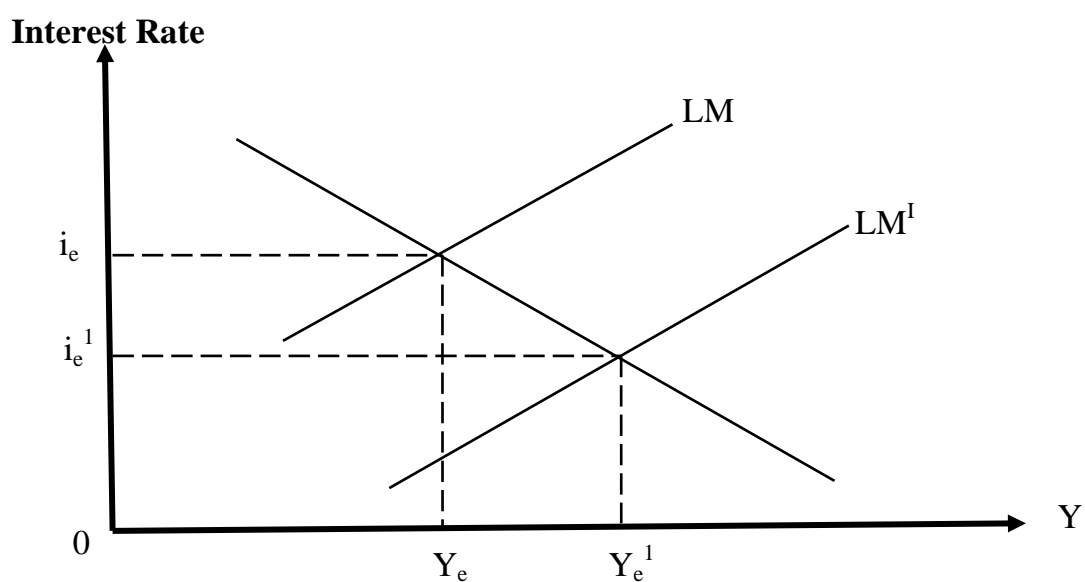
Shift in the LM Curve and Implication for General Equilibrium

TABLE 2 – 4

Interest Rate
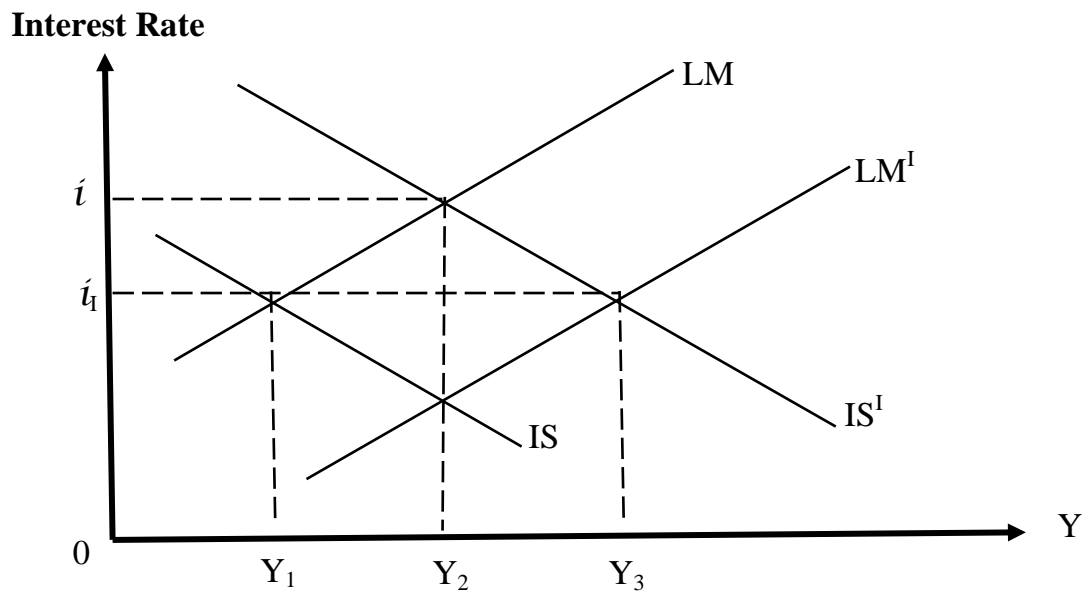
Complementary Fiscal and Monetary Policies

TABLE 2 – 5

Interest Rate
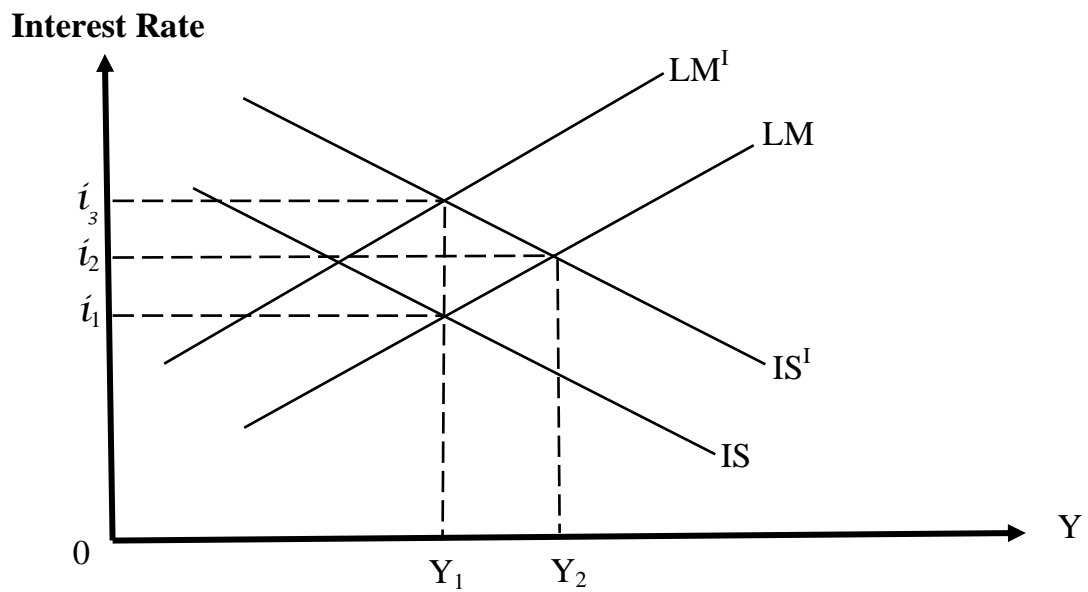
Conflicting Fiscal and Monetary Policies

Table 2 – 6

The relative shares of different credit agencies in financing the credit requirements of rural households in India in 1961-2 were as follows:

Organised Sector	Per cent
Government	2.3
Co-operatives	13.8
Commercial banks	0.7
Unorganised Sector	**Per cent**
Moneylenders	46.6
Traders and Commission agents	10.1
Relatives	8.8
Landlords	0.7
Others	17.0

Source: Reserve Bank of India Bulletin, vol. XIX 1965   p. 1309

Table 2 – 7

Developed and Less Developed Countries: Comparative Rates of Interest, 1958-1969

(Range in per cent per annum)[1]

Country	Call Money	Treasury Bills	Savings Deposits	Time Deposits	Long-Term Government Bond Yields	Central Bank Rate	Commercial Bank Advances
Developed countries							
France	3.51-10.41	-	4[2]	4.50[2,3]	4.94-6.80	3.50-8	-
Japan	-	-	3.60[2,4]	5.50[2,3]	-	5.48-8.40	7.40[2,5]
United Kingdom	-	3.37-7.89	2.50[2,6]	5[2,7]	4.82-9.46	4-8	8½[2,8]
United States	-	1.84-5.53	4[2]	5[2,3]	3.43-6.51	2.50-6	-
Less developed countries							
Group I							
Burma[2]	-	-	0.50[9]	1 ¼[3]	4.5[10]	-	4-6
Ceylon	-	-	3½ [2]	-	2.70-5.36	2.50-5.50	5½-10
India	1.85-6.28	-	3½ -4[11]	-	4.05-5.58	4-6	-
Malaysia	3-5³/₈[2]	4[2]	3½[2]	6[2]	6.25[2]	-	7½-8
Nepal	-	-	4½[2]	6-7[2]	-	-	7½-9
Singapore[2]	-	4	3½-4	6[3]	-	-	7½-8
Thailand	6-12[2]	5[2]	3½[2]	-	7-2	5-8	9-14
Group II							
Tailwan[12]	-	-	5.40-54[9]	9.72-24[3]	-	10.80-14.40[13]	13.32-118.80
Indonesia[14]	-	-	1.5-36[9]	2.5-72[3]	-	-	84-150[15]
							48-120[2,16]
Korea[17]	-	-	16.8-30[9]	15-26.4[3]	-	10.22-23	18-28[5]

Source: International Monetary Fund, *International Financial Statistics*; national source.

1. Approximate range between low and high figures. 7. Seven day's notice. 13. Rediscounts.
2. 1969.   8. Prime rate.   14. Since October 1968.
3. One year.   9. Three months.   15.1968.
4. Postal.   10. Certificates.   16. Private banks.
5. Overdrafts.   11. October 1969.   17.1961-69
6. Post Office and Trustee.   12. 1949-69.

Table 2 – 8

Selected Countries: Estimated Real Rate of Interest on Savings Deposits, 1965-69

(In per cent per annum)

Country	1965	1966	1967	1968	1969
India	-1.20	-10.00	-4.60	4.80	-0.30
Japan	-1.40	-1.80	-3.20	-0.40	-3.30
Malaysia	2.00	2.80	-1.20	3.30	4.50
United Kingdom	-1.40	-0.30	-0.20	-1.00	-2.30

Source: Estimated from Table 1, national sources, and price indices given in International Monetary Fund, *International Financial Statistics.*

Table 2 – 9

Selected Asian Countries: Sectoral Distribution of Gross Savings, 1954 – 59

(In per cent)

Country	Government	Corporations	Households
Ceylon			
1955	50.8	6.7	42.5
1956	50.9	14.3	34.8
1957	50.7	18.0	31.4
1958	10.2	18.3	71.5
1959	7.8	18.3	73.9
1955-59	38.4	13.8	47.8
Taiwan			
1958	41.6	4.4	54.0[1]
1959	33.6	7.6	58.8[1]
1958-59	37.1	6.2	56.7[1]
India[2]			
1954-55	5.6	7.2	87.2
1955-56	3.3	7.9	88.8
1956-57	9.4	7.2	84.8
1957-58	13.2	2.1	84.7
1954-58	8.0	5.7	86.3
Korea			
1958	-83.3	48.0	135.3
1959	-36.0	22.0	114.0
1958-59	-51.6	30.6	121.0

Source: United Nation, Economic Commission for Asia and the Far East, *Economic Bulletin for Asia and the Far East*, December 1962, p. 4.

[1]Derived as a residual by deducting identifiable savings in other sectors.

[2]Net savings.

Table 2 – 10

India: Interest Rates and personal Savings

Aggregate

$$S = -982.7 + 0.15019 \ Y_d \ + 25.965 \ r_s \qquad\qquad R = 0.849$$
$$\qquad\qquad (0.0310) \qquad (118.280)$$

$$S = -1008.6 + 0.12875 \ Y_d \ - 0.32175 \ Y_d + 112.06 \ r_s \qquad R = 0.871$$

Per capita

$$S = -94.386 + 0.37249 \ Y_d \ + 3.7892 \ r_{lg} \qquad\qquad R = 0.698$$
$$\qquad\qquad (0.1327) \qquad (2.0322)$$

$$S = -94.979 + 0.3859 \ Y_d \ + 4.9280 \ r_s \qquad\qquad R = 0.677$$
$$\qquad\qquad (0.1375) \qquad (2.9825)$$

$$S = -46.182 + 0.1660 \ Y_d \ - 0.4774 \ Y_d + 5.009 \ r_{lg} \qquad R = 0.723$$
$$\qquad\qquad (0.2757) \qquad (0.1818) \qquad (2.501)$$

$$S = -96.442 + 0.39178 \ Y_d \ - 0.38311 \ Y_d + 4.912 \ r_s \qquad R = 0.678$$
$$\qquad\qquad (0.2613) \ (0.1788) \qquad (3.1846)$$

Source: K. L. Gupta, Personal Saving in Developing Nations: Further Evidence,' *The Economic Record,* Vol. 46 (1970). P. 248.

[1]Standard errors are shown in parenthesis.

Table 2 – 11

Taiwan: Prices and Interest Rates, 1940 – 46

(In per cent per annum)

Year	Rate of Increase of Wholesale Prices	Black Market Rate of Interest
1940	158	22
1941	177	32
1942	180	33
1943	202	136
1944	224	197
1945	253	270
1946	151	185

Source: United Nations, Department of Economic Affairs, *Inflationary and Deflationary Tendencies*, 1946 1948 (Sales No.: 1949. H.A.D.   p. 48

Table 2 – 12

Taiwan: Interest Rates on Deposits: Quasi-Money; and Private Savings, 1949 – 69

(Rates in per cent per annum;[1] amounts in billions of new Taiwan dollars)

Year	Demand Deposits[2] Nominal rates			Quasi-Money Nominal rates		Real Rates on One-Year Deposits		Amount of Quasi-Money[5]	Private Savings as Percentage of Gross National Product at Current Prices
	Checking	Passbook	Amount	Three-month deposits[3]	One-year deposits[4]	(A)	(B)		
1949	3.24	16.20	0.09	54.00	-	-	-	-	-
1950	1.62	8.10	0.20	39.60	-	-	-	-	-
1951	1.62	8.10	0.34	54.00	-	-	-	-	-
1952	1.62	8.10	0.52	25.80	-	-	-	0.52	-
1953	1.62	5.40	0.70	15.60	24.00	8.88	2.00	0.69	3.9
1954	1.62	5.40	0.93	13.20	19.20	21.63	20.20	0.88	3.5
1955	1.62	5.40	1.15	13.20	19.20	-9.19	5.20	1.03	3.5
1956	0.90	3.60	1.57	12.00	21.60	15.97	8.60	1.07	4.0
1957	-	2.88	1.78	10.20	19.80	18.15	18.80	1.45	3.7
1958	-	2.88	2.57	10.20	19.80	13.93	17.80	2.57	4.3
1959	-	2.88	2.88	9.00	17.04	5.35	5.84	3.46	3.8
1960	-	2.88	3.30	9.00	17.04	5.33	-2.06	4.72	5.0
1961	-	1.44	4.12	7.20	14.40	14.34	10.30	7.75	7.2
1962	-	1.44	4.30	6.48	13.32	6.83	10.52	9.56	7.4
1963	-	1.44	5.76	6.00	12.00	6.50	11.30	12.47	9.5
1964	-	1.44	7.89	6.00	10.80	13.30	10.20	15.81	10.5
1965	-	1.44	9.02	6.00	10.80	12.44	10.10	18.43	10.3
1966	-	1.44	10.27	6.00	10.08	7.84	8.48	23.90	12.7
1967	-	1.44	12.99	5.40	9.72	6.95	7.02	29.57	13.2
1968	-	1.44	15.12	6.48	9.72	8.19	3.42	33.62	11.5
1969	-	1.44	17.14	6.48	9.72	8.13	4.02	41.03	...

Source: Central Bank of China, *Taiwan Financial Statistics Monthly;* Directorate-General of Budgets, Accounts, and Statistics, *National Income of the Republic of China.*

[1]Rates of savings deposits, discounts, call loans, and time loans are monthly rates at the end of December converted to annual rates. Real rates are adjusted for changes in wholesale prices (A) and consumer prices (B); the rates for 1968 are adjusted for price changes between December 1967 and October 1968.

[2]Rates for 1949-56 are applicable only to banks other than the Bank of Taiwan. The rate on Bank of Taiwan demand (checking) deposits was 0.90 from June 1950 to June 1957, when interest was abolished for the Bank of Taiwan. Interest was abolished for all other banks in the following month. The rate on Bank of Taiwan demand (passbook) deposits was 3.6 per cent per annum from June 1950 to July 1957; from that date until 1961 the rate was 2.88 per cent per annum, the same as paid by other banks.

[3]Rate was applicable only to banks other than the Bank of Taiwan until January 1959, when the latter started to accept three-month deposits at the same rate, 9.0 per cent per annum.

[4]From 1953 to 1958 this rate, applicable to all banks, refers to one-year preferential deposits which from April 1953 could be pledged as collateral on mortgage loans: after that date the privilege was withdrawn. From 1959, the rate refers to one-year savings deposits, which were introduced in January of that year. Since then no new preferential deposits have been accepted. From July 1, 1963, the same rate has been applied to two-year and three-year deposits.

[5]From International Monetary Fund, *International Financial Statistics.*

Table 2 – 13

Taiwan: Loan Rates of Interest, 1949 - 69

(In per cent per annum)[1]

| Year | Central Bank Rate | | Time Loans | | Average Free Market Rate of Unsecured Loans |
	Rediscounts	Call loans[2]	Bank of Taiwan[3]	Other banks[4]	
1949	...	46.80	46.80	118.80	208.8
1950	...	41.40	21.60	46.80	144.0
1951	...	41.40	21.60	57.60	126.0
1952	...	36.00	21.60	39.60	79.2
1953	...	21.60	14.40	28.80	51.6
1954	...	21.60	11.88	23.76	49.2
1955	...	21.60	11.88	22.32	54.0
1956	...	18.00	10.80-22.32	21.60	46.8
1957	...	18.00	10.80-22.32	19.80	43.2
1958	...	18.00	10.80-20.32	19.80	39.6
1959	...	18.00	10.80-20.88	18.00	46.8
1960	...	18.00	10.80-20.88	18.00	46.8
1961	14.40	16.20	10.80-18.72	16.20	32.4
1962	12.96	15.84	7.50-18.72	15.84	32.4
1963	11.52	14.04	7.50-16.56	14.04	28.8
1964	11.52	14.04	7.50-15.48	14.04	25.2
1965	11.52	14.04	7.50-15.48	14.04	28.8
1966	11.52	14.04	7.50-14.76	14.04	25.2
1967	10.80	13.32	7.50-14.04	13.32	25.2
1968	11.88	14.04	7.50-14.04	13.32	18.8
1969	10.80	13.32	7.50-14.04	13.32	28.8

Source: Central Bank of China, *Taiwan Financial Statistics Monthly;*

[1]Rates for rediscounts, call loans, and time loans are monthly rates at the end of December converted to annual rate. Free market rate is monthly average rate (based on quotation in Taipei City for the fifth, fifteenth, and twenty-fifth of each month) for unsecured loans converted to annual rate.

[2]Bank of Taiwan rate through 1960; Central Bank rate thereafter. The Bank of Taiwan extended credit through call loans prior to the reactivation of the Central Bank. The call loan rate of the Central bank also applies to its secured advances to other banks.

[3]Begining on December 8, 1956, differential rates have been charged by the Bank of Taiwan; these figures give the minimum and maximum rates.

[4]Rate for secured time loans through 1955 and thereafter for secured loans of less than one year.

Table 2 – 14

Korea: Selected Interest Rates of Banking Institutions, September 30, 1965 – June 2, 1969

(In per cent per annum)

	Prior to Sept. 30, 1965	Sept. 30, 1965	Nov, 16, 1965	Dec. 1 1965	Feb. 1, 1966	June 29, 1967	Mar. 1, 1968	Oct. 1, 1968	June 2, 1969
Lending rates									
Bank of Korea									
Export and UN supply loans	3.5	-	3.5	3.5	-	-	3.5	3.5	-
Rice lien loans	4.0	-	4.0	4.0	-	-	4.0	4.0	-
Commercial bills	11.5	-	21.0	28.0	-	-	21.0	23.0	22.0
Other bills	13.5	-	23.0	28.0	-	-	28.0	28.0	26.0
Purchase of aid goods	9.5	-	23.0	26.0	-	-	26.0	25.2	24.0
Commercial banks									
Export bills	6.5	6.5	-	-	6.5	6.0	-	6.0	6.0
Import bills	-	-	-	-	6.0[1]	6.0[1]	-	6.0[1]	6.0[1]
Commercial bills	14.0	24.0	-	-	24.0	24.0	-	26.0	24.6
Other bills	16.0	26.0	-	-	26.0	26.0	-	25.2	24.0
Overdrafts	18.0	26.0	-	-	28.0	28.0	-	28.0	26.0
Overdue loans	20.0	36.5	-	-	36.5	36.5	-	36.5	36.5
National Agricultural cooperatives Federation									
Rice lien loans	11.0	11.0	-	-	-	-	-	-	-
General fund loans	16.0	26.0	-	-	26.0	26.0	-	25.2	24.0
Agricultural and forestry loans	16.0	23.0	-	-	-	26.0	26.0	25.2	24.0
Cooperative business loans	9.1	12.2	-	-	-	-	-	-	-
Deposit rates									
Time deposits									
3 months	9.0	18.0	-	-	-	-	15.6[2]	14.4	12.0
6 months	12.0	24.0	-	-	-	-	20.4[2]	19.2	16.8
12 months	15.0	26.4	-	-	-	-	26.4[2]	25.2	22.8
More than 18 months	15.0	30.0	-	-	-	-	27.6[2]	-[3]	-
Savings									
National Savings Association	16.8	30.0	-	-	-	-	28.0[2]	25.2	22.8
Instalment	10.0	30.0	-	-	-	-	28.0[2]	25.0	23.0
Short-term									
Notice	3.65	5.00	-	-	-	-	5.00[2]	5.00	5.00
Savings[4]	3.60	7.2	-	-	-	-	-	-	-

Source: Bank of Korea, *Monthly Statistical Review.*

[1]Commercial bank loans for imports of raw materials for earning foreign exchange carry an annual interest rate of 6 per cent. While the rate on loans for importing raw materials and industrial facilities for other purposes is 24 per cent.

[2]April 1, 1968.

[3]The revision on October 1, 1968, abolished time deposits of more than 18 months.

[4]This deposit was abolished in November 1967. The revision on April 1, 1968, created a 'new living' deposit, carrying annual interest of 12 per cent. The June 1969 revision lowered the interest, rate to 9.6 per cent.

Table 2 – 15

Korea: Changes in Holdings of Time and Savings Deposits, 1964 - 68[1]

(In billions of won)

Year	Total Increase	Increase in Holdings of Private Individuals
1964	3.3	+2.8
1965	26.7	+17.5
1966	56.8	+44.0
1967	76.1	+63.1
1968	152.2	+110.5

Source: Bank of Korea, Monthly Statistical Review – based on Flow of Funds Account.

[1]Includes insurance and trust deposits.

Table 2 – 16

Korea: Nominal and Real Rates of Interest on Deposits; Quasi-Money; and private Savings, 1961 – June 2, 1969.

(Rates in per cent per annum; amounts in billions of won)

| Year | Time Deposits | | | | Savings Deposits of National Savings Association | | Amounts of Quasi-Money | Private Savings as percentage of Gross National Product at Current Prices |
| | 3 Months | | 12 Months | | | | | |
	Nominal rate	Real rate[1]	Nominal rate[1]	Real rate[1]	Nominal rate	Real rate[1]		
1961	9.0	0.8	15.0	6.8	16.8	8.6	8.92	-
1962	9.0	2.3	15.0	8.3	16.8	10.1	16.57	2.88
1963	9.0	-10.7	15.0	-4.7	16.8	-2.9	17.52	7.17
1964	9.0	-22.9	15.0	-12.9	16.8	-11.1	20.18	6.51
1965	18.0	-5.6	15.0	1.4	16.8	2.9	39.22	5.80
1966	18.0	1.2	26.4	9.6	30.0	13.2	86.74	8.94
1967	18.0	6.8	26.4	5.2	30.0	18.8	128.99	7.03
1968[2]	-	-	26.4	-	28.0	-	-	-
1968[3]	14.4	4.4	25.2	15.3	25.2	-	257.62[4]	6.85
1969[5]	-	-	22.8	-	22.8	-	-	-

Source: Bank of Korea, Monthly Statistical Review; International Monetary Funds, *International Financial Statistics*
[1]The real rate is adjusted for changes in consumer prices for all cities (1965 =100)
[2]April 1.
[3]October 1.
[4]End of 1968.
[5]June 2.

Table 2 – 17

Malaysia: Interest Rates on Fixed and Savings Deposits and Private Savings, 1959 – 69

	(Rates in per cent per annum; amounts in millions of Malaysian dollars)						
	Fixed Deposits			*Savings Deposits*			*Private Savings[4] as Percentage of Gross National Product at Current Market Prices*
Year	*Nominal rates[1]*	*Real rates[2]*	*Amount[3]*	*Nominal rates*	*Real rates[2]*	*Amount[3]*	
1959	3.50-3.75	-	290	2.50	-	118	-
1960	4.00	4.20	400	2.50	2.70	142	-
1961	4.00	4.20	475	2.50	2.70	154	-
1962	4.00	3.90	485	2.50	2.40	182	17.1
1963	4.00	0.90	543	2.50	-0.60	218	16.3
1964	2.50-5.00	3.00-5.50	600	2.50	3.00	257	17.4
1965	2.50-5.00	1.50-4.00	727	3.00	2.00	291	19.7
1966	2.50-5.00	2.30-4.80	842	3.00	2.80	340	18.6
1967	3.00-6.00	1.20-+1.80	1,012	3.00	-1.20	434	17.9
1968	3.00-6.00	2.80-5.80	1,260	3.50	3.30	484	18.4
1969	3.00-6.00	4.30-7.30	1,488	3.50	4.80	550	-

Source: Bank Negara Malaysia, *Annual Reports* and *Quarterly Economic Bulletin.*

[1]The nominal rates in 1959 were 3.50 per cent for the 3-6 month deposits and 3.75 per cent for the 9-12 month deposit; the rate for 3-12 month deposit; were 4.00 per cent for the period 1960-63 and 5.00 per cent for the period 1964-66; in 1967 and 1968 the fixed deposit rates were made to vary with the length of deposit, from 5.50 per cent for the 3-month deposits and 5.75 per cent for the 6-month deposits to 6.00 per cent for the 9-12 month deposits. Since 1964 the deposit rates for one month have been fixed at 2.50 per cent for the period 1964-66 and at 3.00 per cent for the period 1967-68.

[2]As adjusted by the retail price index (1959=100). Minus sign indicates negative real rates.

[3]At the end of period.

[4]Mid-term review of the First Malaysian Plan, 1966-70 (figures for 1968 are preliminary).

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