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Topic: Portfolio Diversification, Classification of Financial Instruments, Code of Ethics and Professional Standards

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Objectives

As the economy of various countries in developed and developing countries such as Nigeria recovers from the recession caused by the collapse of the financial industry, Financial Market and instruments, Portfolio diversification and Code of Ethics and Professional Standards remains high on the agenda and an integrated approach to monitor and control risk confronting financial instruments is needed. This session will provide an exposition and get responses on some of the issues involved in financial market and instrument, Portfolio diversification, Code of ethics and Professional Standards. This paper consists of three modules.

Module One (1.1 -1.9) dwell on: Financial market and instruments,

Module Two (2.1 -2.7) explains the Concept of Portfolio diversification, Classification of Financial market instruments, Investment instruments, Classification of participants in the financial market, Understanding role, investment horizon and motives, Uses of financial Derivatives and Risk associated with financial Assets while:

Module Three (3.1- 3.17) gives an exposition of Code of Ethics and Professional Standards in the Nigerian finance service industry with emphasis on the Nigerian Insurance Industry.

MODULE ONE: FINANCIAL MARKET AND INSTRUMENTS

1.1 INTRODUCTION: A Financial market can be describe as a market where financial assets are exchange i.e traded in. Put another way, it is the market where financial assets are traded in by those with surplus funds in exchange for certain financial papers with those with deficit funds i.e it is a market for financial assets from areas of surplus funds to areas of deficit funds. The existence of a financial market is not a precondition for the creation and exchange of financial

assets but in most situations they are created and thereafter traded in certain type of organized financial market arrangement.

1.2 FINANCIAL ASSETS

There are several kinds of assets which an individual or organization can own. They include physical and unphysical assets. The former includes lands, buildings, cars, plants, machineries, and office and household items. The latter include financial assets, human skills, knowledge and talents. Financial assets include cash, bonds, and equities.

Financial markets provide four (4) major economic functions. These are:

- (a) Provisions of financial asset such as bonds, stocks and shares, treasury bills and treasury certificate etc are financial instruments that enable financial market participants to invest and divest their financial holdings with a view to attaining financial goals and objectives.
- (b) Interactions of buyers and sellers – In the financial market, the interaction of both buyers and sellers determine the price of the asset traded in; simply put the required rate of return on a financial asset. This is called the price discovery process.
- (c) Mechanism for investors to sell a financial asset. Financial markets offer liquidity, which is an attractive feature when an investor wishes to sell the asset.
- (d) Reduction of search and information costs. The financial market reduces the transaction costs of search and information in buying and selling of financial assets. Search represents **explicit costs**, which may include money spent to advertise the intention to sell or buy a financial asset and an **implicit cost** such as the value of time, which can be spent in locating a seller. The presence of such organized financial markets like the stock exchange, discount houses and banks reduce search costs.
- (e) Information costs entail the amount and likelihood of the cash flow, which is expected to be generated. In an efficient financial market prices reflect the aggregate of all information generated by all market participants

1.3 CLASSIFICATION OF FINANCIAL MARKETS

We can classify a financial market in two ways:

(a) **By type of claims**

(b) **By maturity of claims.**

By type of claim – Markets can be classified by the type of claims, which may be either for a fixed naira figure and a residual amount. Fixed naira claim is the first financial asset, which is traded in the market called **Debt Market**.

Residual or equity claim is the other financial asset instrument which is traded in the **Equity or**

Stock Market. Preference shares are equity claims that entitle the investor to receive a fixed amount on investment. This makes a preference share to possess the characteristic which qualify it as part of debt market and the equity market. The part of the stock market, which does not include the preference shares, is called **Equity Market**.

By Maturity of Claims refers to the duration of the tenor. There is the financial market for short-term maturity called **Money Market** and for long term maturity called **the Capital Market**. Equity instruments are usually perpetual and are therefore classified as **Capital Market**. In money market, the most important instruments are the Treasury Bills and Certificates, Bankers' Acceptance, Commercial papers, Certificates of Deposit and the Repurchase Agreement

Investment Instruments

Money market Instruments

- (i) **Treasury bills:** The CBN treasury bills are the most marketable money market instruments in Nigeria. Treasury bills of 91 days or 182 days maturity can be issued weekly if there is the need for such issues. Treasury bills are the most liquid financial instruments because they can be easily converted to cash with little risk.
- (ii) **Certificates of Deposit:** It has the features of time deposit. It is made with a bank and cannot be withdrawn on demand. At the end of the period, the bank pays both the interest and the principal to the investor.

- (iii) **Commercial Papers:** They are usually issued by large, well known companies as short-term unsecured debt notes. This is done to avoid borrowing directly from the bank. They are backed by bank line of credits, which gives the company access to funds that can be used to pay off debts at maturity of paper.
- (iv) **Bankers Acceptances:** This starts as an order to a bank by its customer to pay a certain amount at a future date. When a bank endorses the order for payment as “accepted”, it assumes the responsibility of payment to the holder of the acceptance

Capital Market Instruments

- (i) **The Fixed Income Securities:** Examples are treasury bonds, state and local government bonds etc. They are “fixed income” instruments because they promise a fixed rate of interest which gives a stream of income. Payments are determined by the issuer or its agent on the issuer’s instruction.
- (ii) **Treasury bonds:** They range from 5 to 25 years in maturity. The Nigerian government borrows in large part to finance some capital project by selling treasury bonds
- (iii) **Municipal Bonds:** States and local Governments issue municipal bonds. They are similar to treasury bonds but not very common in Nigeria. Their maturities vary widely. Maturity dates could be up to 30 years. One of the attributes of this type is that they are **tax-exempt**. Since investors pay no tax on the interests received, they accept lower yields on these securities.
- (iv) **Corporate Bonds:** These are means by which private firms borrow funds directly from the public. They are similar in perspective to the treasury bills as they pay twice in the year over the lives of the bond and return the face value of the instrument to the bondholder at maturity. However, it is riskier in nature than treasury bills because of default. There are three types **Secured bonds, unsecured bonds** and **Subordinated debentures**.

The other classification is in terms of whether they are newly issued financial claims. When an issuer sells to the financial market (public) new financial instruments it is said to issue new

financial assets and are traded in the Primary Market Assets while the market for existing market instruments or assets are traded or exchanged in the **Secondary Market**.

Financial Market

(i) Money Market

Characteristics

Duration - Short-term usually less than two years

Type (a) Treasury bills/Certificates issued by government (b) Commercial papers, bankers acceptances and certificate of deposits issued by companies

Payment terms – (a) ‘a’ above is based on upfront payment of interest (b) ‘b’ above is based on payment of discount.

Market types – Primary –issuing house e.g Central commercial banks (b) Secondary discount houses.

Participants – CBN. Commercial/Merchant banks, Discount houses, Bureau de change, non-bank public, non-bank financial houses.

Regulators - CBN

Capital Market: Characteristics

Duration – Medium/long-term usually more than 2 years

Type (a) Government bonds (b) Stocks and Shares and debentures stocks issued by companies

Payment terms – (a) ‘a’ above is based on interest payment (b) ‘b’ above is based on dividend and interest.

Market types – Primary –issuing house e.g Issuing houses (b) Secondary - Stock Exchange

Participants – Brokers, Jobbers, Issuing houses, non-bank public, Commercial/Merchant banks, non-bank financial houses.

Regulators – (a) Securities & Exchange Commission (b) The Stock Exchange

1.4 PREDITABILITY OF CASHFLOW, RISK AND RETURN

The return an investor will realize from an investment such as financial asset will depend on the return and cashflow that is expected to be received. This will include interest payments on debt instruments and dividends on stocks or shares, as well as the repayment of principal for the debt instrument and the expected eventual sale price of a share.

Expected return depend on the predictability of the cashflow and this a major determinant of the value of financial assets.

If an investor is risk averse, the riskiness of a (financial) asset can be equated to the uncertainty or unpredictability of its return.

Where there is little inflation, we can differentiate between nominal and real expected return. The **nominal return** is the expected naira to be received, which does not adjust in naira term to take account of inflation. The **real return** is the nominal value less adjustment in the loss of purchasing power (i.e inflation) of the financial asset.

Example

If the nominal return on N1,000 for one year is 10%, then at the end of the year an investor would expect to receive N100 as the yield and N1,000 as the principal totaling N1,100. For example, If inflation rate which is on the average of 5 %, the purchasing power of real (expected) return is 5%. The real (expected) return is arrive at by subtracting the expected inflation rate from the nominal (expected return). It is $10\% - 5\% = 5\%$. Some financial assets are complex in nature because they are combinations of two or more simpler assets e.g derivatives such as options. Their true value can be found if one decomposes” it into its component parts and price each one separately

Tax rates may differ from one financial asset to another and also depending on the type of issuer, the duration of the asset and the nature of ownership etc.

1.5 INSTITUTIONS THAT ENABLE INVESTORS TO DIVERSIFY INVESTMENT

As the financial markets become more complex, the investors require guidance in their investment. The investors need to have a more diversified holding of financial assets to minimize

the risk of a loss. Whereas a large investor is not ruined by loss of a few of his investments for the small investor, the loss of one little egg could be too much to bear.

It is for this reason that the secondary market institutions provide avenues of diversification for the small investor. Such institutions are:

- i. Pension funds – the institution set up for staff to provide for the future.
- ii. Investment funds which are set up by insurance companies
- iii. Mutual funds or unit trust companies, which exist in different parts of the world to aggregate the savings of many small investors into pool of funds to be properly invested and managed.

The last mentioned is the least developed in Nigeria there are few unit trust and pension funds in Nigeria. The most significant developments in the Nigerian financial system in the immediate future are expected to take place in this category as well as in the primary securities market.

1.6 HOW SHAREHOLDERS ARE REWARDED

The investment motivation for investment in shares is the hope and expectation of a flow of income return in the form of dividends and the prospect of a capital gain through an increase in the price of the share.

- (i) Flow of income – dividend
- (ii) Capital growth – If market forces do not favour a particular share then the price of that share price will fall and the investor faces a potential loss until such time as the share price exceeds the price initially paid
- (iii) Overall returns – The overall return on shares have protection from inflation through investment in a real asset. The investment return will, however, be a combination of dividend and capital growth and given that neither of these returns is fixed at any point in time, the return will be considerably more volatile in the short term.

1.7 FACTORS AFFECTING THE VALUE OF EQUITIES

Investors or potential investors should be aware that the market price of equities at any point in time is not solely dependent on the profitability of the company; the supply and demand for equities is driven by a large number of objective and subjective factors.

- **Interest rate:** when interest rates rise the amount of profit used to service variable –rate loans, including overdrafts, will rise. This, obviously, reduces the level of profit attributable to shareholders. Company with few borrowings will not be adversely affected. In times of falling interest rates, the shares in highly-borrowed companies should prosper. Fixed interest loans are not affected in this way.
- **Currency fluctuations** when company import raw materials for its manufacturing process, adverse currency movement can lead fall in profits. Conversely, if a company relies on export markets for a significant part of its profits, a currency movement that increase its selling cost (fall in value of sterling) will have the potential of reducing its export sales and extension profit
- **Political factors:** unpopular government leads to loss of confidence
- **Company specific:** new product development can increase profit
- **Diversification:** investing across a spread of industries or sectors

1.8 PROTECTION AGAINST ALOSS IN SECURITIES

To protect against a loss, investment banks engage in hedging strategies. There are various strategies that are employed by traders to generate revenue from positions in one or more securities: **riskless arbitrage, risk arbitrage and speculation**

Risk less arbitrage – For example, some companies trade in more than one location within the Capital Market. If there are price discrepancies in the various markets, it may be possible to lock-in a profit after transaction costs by selling the security in the market where it is priced higher and buying it in and selling the security in the market where it is priced lower. The key is that riskless arbitrage transaction does not expose the investor to any adverse movement in the market price of the securities in the transaction

Risk Arbitrage - There are two types. The first arises in the case of exchange offers for securities coming out of bankruptcy proceeding.

For example, suppose that company A is being reorganized, and one of its bonds is now selling in the market for N20. If the trader believes that the outcome of the bankruptcy proceedings he will exchange three securities with an estimated value of N28 for the existing bond worth N20, then the trader will buy the existing bond. The trader will realize a profit if in fact the final exchange offer is as anticipated, and the value of the package is worth N28. The risks here are (i) the risk that the exchange will not take place on the terms that the trader believes, (ii) and the risk that the value of the package of three securities that will be received will be less than N20.

The other type of **risk arbitrage occurs when a merger or acquisition is announced**. The merger or acquisition can involve only a cash exchange, an exchange of securities, or a combination of both.

First consider a cash exchange: suppose that company X announces that it plans to make an offer to buy company Y's per share at a time when the company Y's share would rise to around N100. There is, however, a chance that company X will, for whatever reason, withdraws its planned purchase of the stock. The price of company Y's shares subsequently may rise to, say; N90 rather than N100. The difference is the market's assessment of the likelihood of the planned purchase not being completed. An investor who buys share of Y can lock-in a profit of N10 if the purchase occurs at N100. The risk is that it will not occur and that the price will decline below N90.

Speculation: Speculation trading is one in which the trader takes a position on the capital of the investment banking firm to take advantage of a specific anticipated movement of price or a spread between two prices. However, just as often we read about large speculative strategies we also read about huge sums of money being lost however the strategy may be.

1.9 DERIVATIVES: Derivative is an instrument whose value is derived from the value of another financial instrument(s). Derivative is another means of investing in the instruments from which the derivative is derived. Because, the values of derivative securities are

contingent/dependent on the value of the underlying instruments, they are regarded as contingent securities.

Just like orange juice is derived from oranges, Apple juice from Apple, mangoes juice is a product from mango etc. Derivatives securities are derived from some basic instruments like shares, stocks, commodities, currencies etc. Derivative instruments do not generate cash flows themselves. They derive their cash flows from the cash flows and risk characteristic of the underlying securities.

Underlying Securities: They are conventional, original or primitive instruments from which derivatives derive their value. They include Shares, Stocks, Bonds, Commodities, Currencies, Interest rate, Treasury bills/Bonds, Stock index, Oil & Gas, Real estate, Agricultural Produce, Precious Metals, Emission, Weather, Credit, Plastics, Power, Freight, Energy, Scrap and second items etc

The Role of Derivative Market

- (i) **Risk Management** – Derivative enable investors wishing to transfer their risk to those willing to accept.
- (ii) **Price delivery** – Derivates help investors in obtaining information about future prices. Some people even believe that the price of futures and forward contract will likely be the future spot price.
- (iii) **Market Completeness** – In a derivative market, all identifiable pay-off can be obtained. It is possible to trade in all securities available in the market over those derivable.
- (iv) **Speculation** – Provides opportunities for knowledgeable traders to expose themselves to well calculated risk in pursuit of big profit.
- (v) **Market Efficiency** – The ease and low cost of transacting in the derivative market facilities arbitrage trading and rapid price adjustment

- (vi) **Operational Efficiency** – Derivative markets offer lower transaction cost, greater liquidity than spot markets, low capital required for investments, risk and return can be adjusted to desired level etc
- (vii) **Achieving Leverage** – Derivative market is used to achieve greater leverage. Traders in the derivative market use a small amount of money to make an investment of much greater value. Also a small price changes can led to large gains and losses

Problems of Derivatives

- (i) Derivatives are sophisticated instruments and their use requires good understandings of fiancé/financial engineering
- (ii) Derivatives are still very abstract in Nigeria. Derivative instrument are not still available or are still developing. No well establish exchange.
- (iii) Using derivatives without having the requisite knowledge is dangerous. Unfortunately in recent time, many individuals have led their firms down the path of danger and destruction by misuse of derivative.
- (iv) Derivatives are like electricity, it becomes very devastating if it is misused or misapplied or if its users become careless.
- (v) Where there is high leverage, little changes in price can lead to large amount of losses (and also gain).
- (vi) To use derivatives in inappropriate situation is also dangerous. It is risking to speculate when one should be hedging and so on and so forth.

MODULE TWO – PORTFOLIO DIVERSIFICATION AND CAPITAL ASSET

PRICING MODEL (CAPM)

Portfolio diversification, Concepts of investment risk and return assumptions behind the single factor Capital Asset Pricing Model (CAPM) and variants, Limitations of the CAPM model; the components of total risk – systematic and Unsystematic risks, CAPM and interpreting the beta of a security.

2.1 INTRODUCTION: The continued privatization and commercialization of government agencies by the Federal Government has generated much interest in share ownership in companies, with over-subscription for the shares so far offered in some cases. The recent N25 billion recapitalization of banks in 2005 has further heightened the interest in share ownership. Some banks have their shares oversubscribed than others. The same scenario applies to other sectors of the economy. From the point of view of an investor the likely situation is that of continuous accumulation of ordinary shares in different companies without regard to the ways in which these investments are related. The objective of this paper is to shed light on the importance of diversification of securities of investors. A discussion on portfolio theory is appropriate at this time as investors concern should not only be focused on returns, but also on associated risk of the investment proposed or held.

It is crucial at this period of global financial meltdown when prices of shares have nosedived without any guarantee that the prices of these shares will rise in the foreseeable future. However, this is the hallmark of stock trading as it is often associated with ups and down (bullish and Bearish period).

The treatment of portfolio theory in this write-up will be examined basically on the theoretical background but it is hoped that it would have stirred up much interest to encourage investors to re-examine the composition of their “basket of investments.” It will also serve as a summary of required knowledge of financial management students, lecturers, the public and references provided will serve as a good overview of the topic.

2.2 PORTFOLIO THEORY MEASUREMENT OF PORTFOLIO RISK

A portfolio is merely a collection of investments which are created to diversify holdings of wealth and to achieve, simultaneously, low risk and high returns. The investors, in choosing a security, will be concerned about its expected returns and about the degree of risk associated with that return.

An investor can be a risk lover, risk neutral and risk averter. The usually accepted assumption is that he will be averse to risk, but will seek to maximize his return. The risk of portfolio is a function of other securities constituting the portfolio. By selecting securities that have little relationship with each other, an investor is able to reduce relative risk.

The combination of securities in such a way as to reduce risk is known as diversification. Risk can be defined as the possibility that the actual return will deviate from the expected return. It is measured by standard deviation, δ or the measure of variance δ^2 . This can further be validated by the coefficient of variation (δ/x).

Generally, however the effect of diversification on the risk is dependent on the correlation between the possible returns of investment comprising the portfolio. The reduction in risk achieved by diversification depends, *ceteris paribus*, on the coefficient of correlation. The best results are obtained when the two assets are negatively correlated with the optimum being where the assets are perfectly negatively correlated.

However, an investor may concentrate his investment in a particular sector e.g bank. Most times investors do this out of **emotion** without any financial analysis of the share worth. Combination of securities A and B will result in less risk than that attached to each of the securities separately, provided that the correlation is not too high and positive. It is possible to set down some general

rules, which will enable the investor to select a set of strategies, which appear better than others viz

- (a) When the investor is faced with selecting two portfolios with the same return and different risk, he will choose the one with the lower risk.
- (b) If two portfolios have the same risks and different returns, he will prefer the one with the higher return.
- (c) If one portfolio has both a higher return and a lower risk than another, the investor will prefer the first portfolio.

Based on the foregoing assumptions and also considering the investor who is averse to risk, he will only be interested in risk and returns, and not in any further aspect of the security. In some exceptional cases, the investor will be concerned about the growth of his investment rather than immediate capital (cash) that is return on his investment.

The relationship between investment risk and reward is fundamental to efficient portfolio planning and generally dictates that it is only by accepting higher levels of risk in an investment portfolio that an individual can hope to achieve higher levels of investment return.

An investor seeking to minimize or totally avoid any risk to the underlying capital or future returns must, the theory dictates, direct the money to safe investment havens which, the investor has to accept, will yield lower returns than those that might be expected from higher-risk investment.

2.3 REVIEW OF EARLIER LITERATURE

Shim and Siegel (1998) explained portfolio return as the expected return on a portfolio of assets and the weighted average return of individual assets in the portfolio is the fraction of investment in the total funds. An efficient combination of assets and its foundation lies in the work of Markowitz. According to Dobbins and Witt (1988) the assumptions underlying the model are as follows:

1. The return on an investment adequately summarizes the outcome of the investment, and investors visualize a probability distribution of rates of return
2. Investors' risk estimates are proportional to the variance of return they perceive for a security or portfolio
3. Investors are willing to base their decisions on just two parameters of the probability distribution function- the expected return and variance of return.
4. The investor exhibits **risk aversion**, so for a given expected return he prefers **minimum risk**. Obviously, for a given level of risk the investor prefers **maximum expected return**.

Correlation Coefficient is very important in the measuring of portfolio risk. Van Horne and Wachowicz (2001) posited that for standardized statistical measure of the linear relationship between two variables, **it ranges from -1.0 (perfect negative correlation), through 0 (no correlation) to +1.0 (perfect positive correlation)**.

Covariance is statistical measure of the degree to which two variables (e.g. securities' return) move together. A positive value means that, on average, they move in the same direction. **The total risk of a portfolio is measured by the standard deviation of the probability distribution of possible security returns.** In their study, Bodie and Marcus (2003) observed that the low risk of portfolio is due to the inverse relationship between the performances of the two funds: Stock fund and Bond fund. In a recession, stocks fare poorly, but this is offset by the good performance of the fund. Conversely, during boom scenario, bonds fall, but stocks do well.

Therefore, the portfolio of the two risky assets is less risky than either asset individually. Portfolio risk is reduced most when the returns of the two assets most reliably offset each other. In portfolio management, Strong (2000) emphasize six aspects: Learning the basic principles of finance, setting portfolio objectives, formulate investment strategy, have a game plan for portfolio revision, performance evaluation and protect the portfolio when appropriate. Bodie and Marcus (2005) found that seemingly risky securities might be portfolio stabilizers and actually low-risk asset. Myers (2003) found that stock's contribution to the risk of a fully diversified portfolio depends on its sensitivity to market changes.

Correlation Coefficient measures the degree to which two variables move together. This sensitivity is generally known as beta β . Jordan, Westerfield and Ross (2001) in his study, observed that spreading an investment across a number of assets will eliminate some, but not all of the risk.

Risk has two parts. A part of the risk arises from the uncertainties which are unique to individual securities, and which is diversifiable if large number of securities is combined to form well diversified portfolio. The part of the risk that can be reduced through diversification is called **unsystematic risk** or **unique risk** e.g a company loses a big contract in a bid, competition, workers declare strike etc. The part of the risk that cannot be reduced through diversification is **systematic risk** or **market risk** e.g **the government changes the interest rate, corporate tax is increased, the inflation rate increases.**

Total risk = Systematic risk + Unsystematic risk

A risk –free security is one which has a zero variance or standard deviation

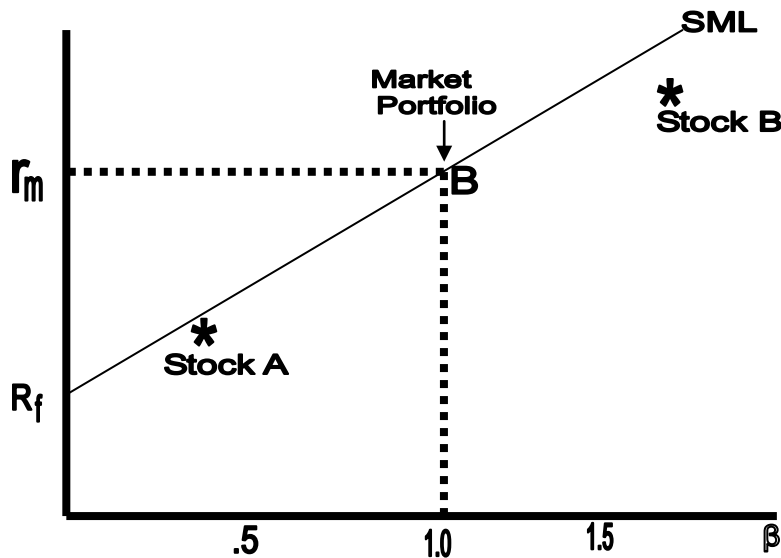
2.4 ASSUMPTIONS OF CAPM

- (i) **Market efficiency** – The capital markets are efficient. This implies that share price reflect all available information.
- (ii) **Risk aversion** – Investors are risk averse. They evaluate a security's return and risk in terms of the expected return and variance or standard deviation respectively. They prefer the highest expected returns for a given level of risk.
- (iii) **Homogenous expectations** – All investors have the same expectations about the expected return and risk of securities.
- (iv) **Single time period** – All investor's decision are based on single time period.
- (v) **Risk-free rate** – All investors can lend or borrow at a risk-free of interest.

The expected return on a risky asset depends only on that asset's systematic risk and it is measured by Beta Coefficient- Greek Symbol β . Beta Coefficient is the amount of systematic risk present in a particular risky asset relative to that in an average risky asset.

Brealey and Myers (1996) posited that lending and borrowing extend the range of investment possibilities. If you invest in portfolio S and lend or borrow at the risk-free interest rate r_f , you can achieve any point along the straight line from r_f through S. This gives you a higher expected return for any level of risk than if you just invest in common stock. In the diagram below, fig.1 at equilibrium no stock can lie below the Security Market Line (SML). For example, instead of buying stock A, investors would prefer to lend part of their money and put the balance in the market portfolio.

Fig.1 CAPITAL ASSET PRICING MODEL
CAPM



And instead of buying stock B, they would prefer to borrow and invest in the market portfolio. **Capital Asset Pricing Model (CAPM)** is a method of expressing the risk-return relationship for a security or portfolio of securities: it brings together systematic (Undiversifiable) risk and return. CAPM provides a framework for measuring the systematic risk of an individual security and relate it to systematic risk of a well-diversified portfolio. In the context of CAPM, the risk of

an individual security is defined as the volatility of the security's return vis-à-vis the return of a market portfolio. The risk (volatility) of individual securities is measured by β (Beta). Beta is a measure of systematic risk of a security. In capital market, risk free security has no volatility, and has a zero beta.

The expected rate of return on a security (R_j) is equal to a risk-free rate (R_f) plus the risk premium. The risk premium equals to the difference between the expected market return (R_m) and the risk free rate multiplied by the security's beta. The risk premium varies with systematic risk is measured by beta. (β)

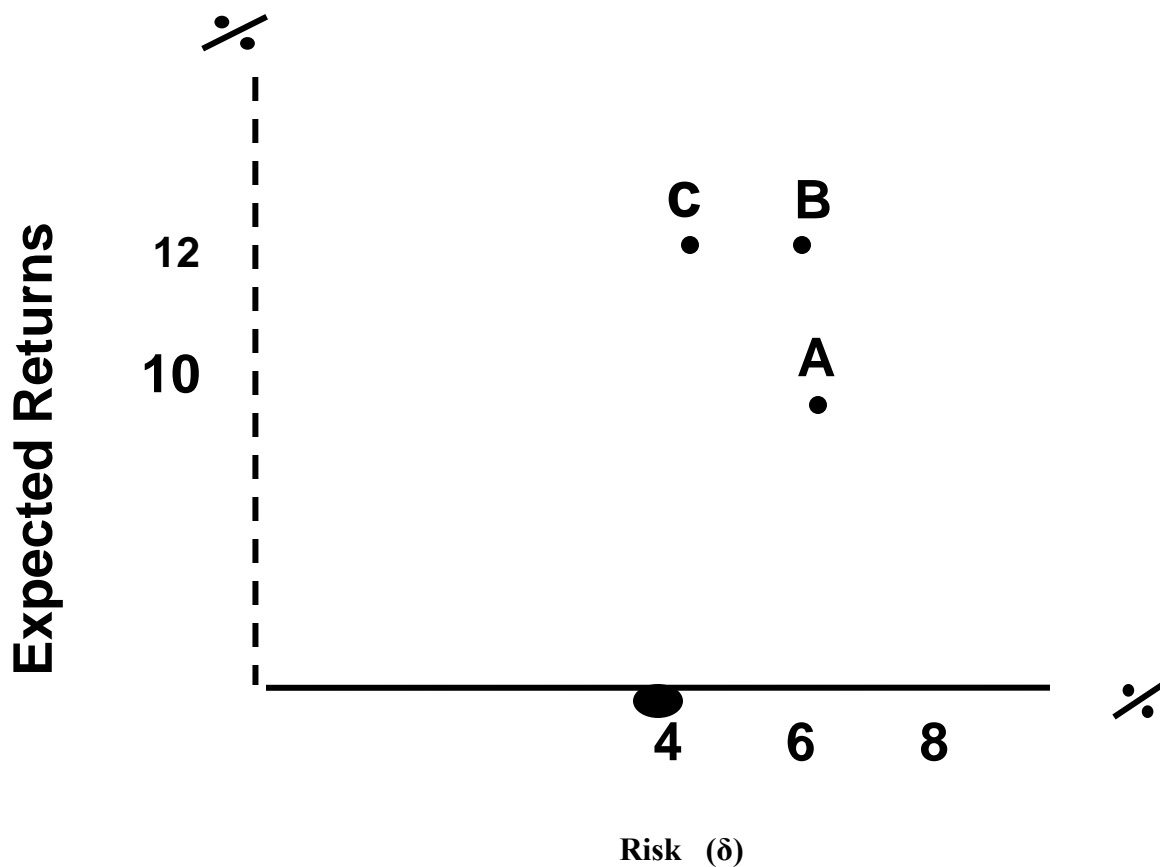
$$E(R_j) = R_f + E(R_m - R_f) \beta$$

When CAPM equation is shown in graph form, the resultant straight line: ($y = ax + c$) is referred to as Security Market Line (SML). It is line which exhibits the positive relationship (correlation) between systematic risk of a security and its expected return. The SML represents the level of return expected in the market for each level of the share's beta (market risk), thus explains the risk-return trade-off. Let us assume that there are three portfolios with associated risks and return characteristics:

PORTFOLIO	RETURN%	δ %
A	10.0	6.0
B	12.0	6.0
C	12.0	4.0

If the investor has a choice between A and B, he will choose B because it has a higher return than A even though they are at the same risk level. Choice between B and C will be in favour of C because of its lower risks. If the investor has a choice between the three portfolios he will choose C because of its higher returns and lower risk. This can be depicted graphically thus:

Fig.2



The expected returns (R_p) and risk (δ) of a portfolio can be calculated by the following formula, which is applicable for a simple two-asset portfolio security A, and B.

$$R_p = (X) (R_A) + (1 - X) (R_B) \quad \dots\dots\dots \text{Equation} \dots\dots\dots 1$$

$$P = \sqrt{X^2 \delta_A^2 + (1 - X)^2 \delta_B^2 + 2X (1 - X) \delta_A \delta_B \text{ COR}} \quad \text{Equation} \dots\dots\dots 2$$

$$\text{or } \delta_p = \sqrt{A^2 + B^2 + 2ABr} \quad \dots\dots\dots \text{Equation} \dots\dots\dots 3$$

Where: COR_{AB} or r = Coefficient of Correlation of the possible returns from securities A and B.

X = the probability of returns A; $(1 - X)$ = the probability of return B. Equation (3) is a simplified version of (2) where: $A = \delta$ of A \times weight or probability of A; $B = \delta$ of B \times weight or probability of B; r = coefficient of correlation.

For individual portfolio, Expected Returns $R = R_1 (P) + R_2 (P)$

Where: R = Expected returns; R = possible returns; P = probability of possible returns

and Standard deviation $(\delta) = \sqrt{\sum (R-R)^2 \times P}$

2.5 LIMITATIONS OF CAPM

- (i) IT is based on unrealistic assumptions
- (ii) It is difficult to test the validity of CAPM
- (iii) Betas do not remain stable over time

2.6 METHODOLOGY

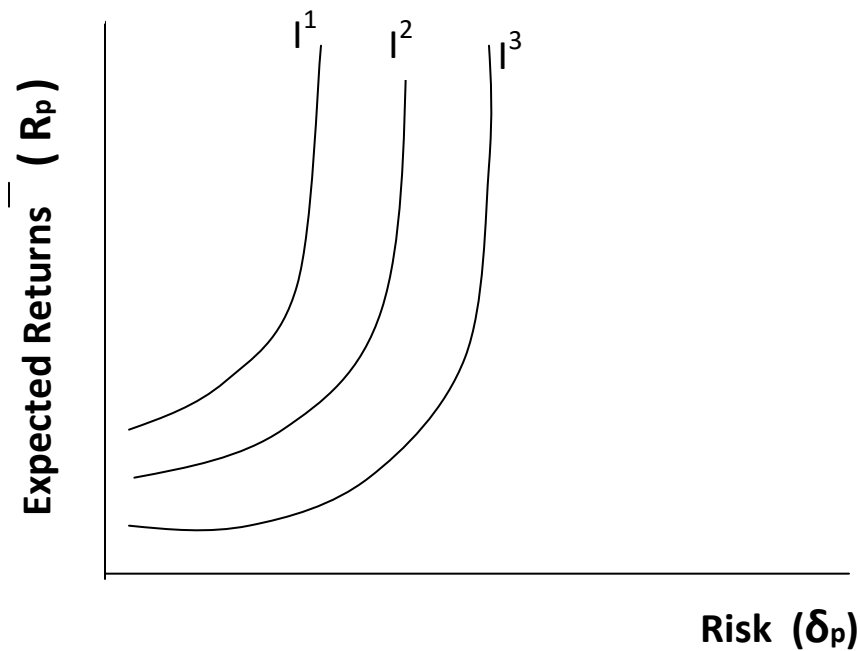
The method used in this paper consists of primary data generated by the author, and secondary data elicited from relevant textbooks. To summarize portfolio risk measurement, we can examine the following problem. Global Financial Meltdown Company is considering investments in one or both of two securities A and B, and we have the following information:

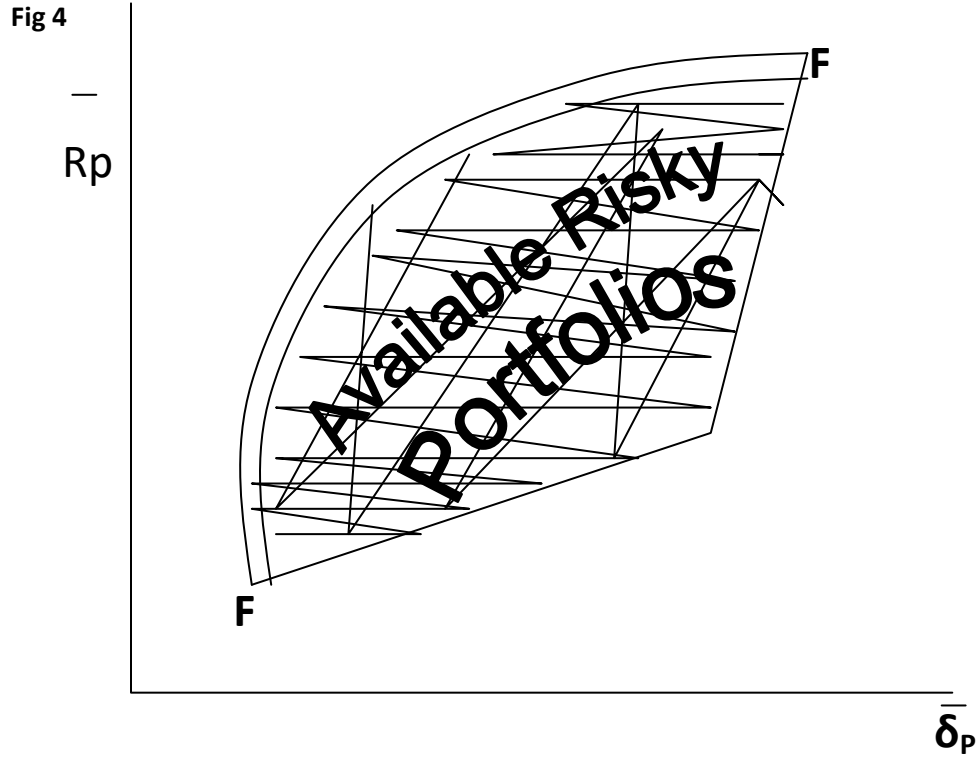
Security	Possible % Return	Probability of occurrence
A	40 (A_1)	0.5
	20 (A_2)	0.5
B	60 (B_1)	0.5
	10 (B_2)	0.5

The problem now is how we manage this investment of the investor so to maximize return and minimize risk. This can be done by: (a) Calculating the expected return and standard deviation of each security separately, and the expected value and standard deviation of a portfolio: For example in the investment comprising 80% of A and 20% of B, assuming no correlation between possible returns, and (b) we can calculate the expected value of portfolio return and its associated risk using an appropriate formula for cases 1-111.

- i. Case I: Perfect positive correlation
- ii. Case II: Perfect negative correlation
- iii. Case III: Zero correlation

Fig 3: PORTFOLIO ANALYSIS AND SELECTION





To obtain the best combination of securities will depend on the investor calculation of expected value of return and standard deviation and this is a function of his utility as shown in Fig 3. The curves are known as indifference curves, the investor is different between any combination of expected value of return and standard deviation on a particular curve. The combination of expected return and standard deviation result in a fixed level of expected utility. The greater the slope of the indifference curve the more averse the investor to risk. As we now move to the left in Fig 3, each successive curve represents a higher level of expected utility.

The individual investor will want to hold that portfolio of securities that places him on the highest indifference curve, choosing it from the opportunity set of available portfolios Fig 4. This opportunity set reflects all possible portfolios of securities as envisioned by the investor. Every point in the shaded area represents a portfolio that is attainable by the investor. The double line, FF, at the top of set is the line of efficient combinations or the efficient frontier. It depicts the trade off between risk and expected value of return.

The objective of the investor is to choose the best portfolio from those that lie on efficient frontier. The portfolio with the maximum utility is the one at the point of tangency of the efficient frontier with the highest indifference curve, **Fig 5**, point M.

2.7 PRESENCE AND RELEVANCE OF RISK-FREE SECURITY

If a risk-free security exists, and the investor is able not to lend but to borrow it as well, then to determine the optimal portfolio under these conditions, we first draw a line from the risk-free rate R_F in **Fig 6**, through its point of tangency with the efficient frontier FF . This line then becomes the new efficient frontier. Any point on the straight line tells us the proportion of the risky portfolio, M , and the proportion of loans or borrowings at the risk free rate. To the left of point M , the investor will hold both risk-free security and portfolio M . To the right he would hold only portfolio M and would borrow funds in order to invest further in it. The capital market line is an expression of the optimal relationship between risk and the expected rate of return on what Markowitz referred to as efficient portfolios. An efficient portfolio is one which maximizes return for a given level of risk. The optimal investment policy of tangency is between the straight line $RF-M-CML$ and the highest indifference curve. If borrowing were prohibited, the efficient frontier will no longer be a straight line through out but would consist of line $RF- M- F_1$. The straight line is called Capital market line (CML) and it describes the tradeoff between expected return and risk for various holdings of the risk-free security and the market portfolio. The slope of the CML represents the market price of risk.

Fig.5

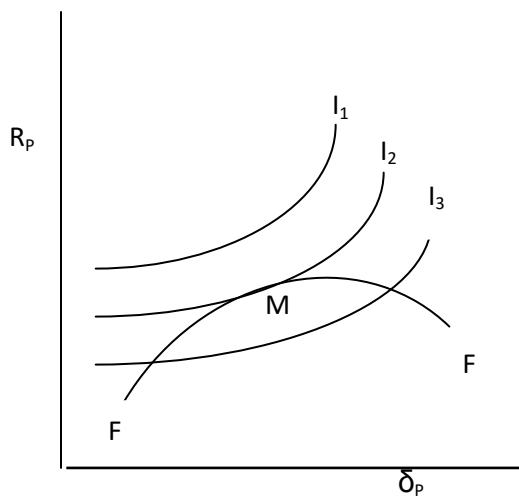
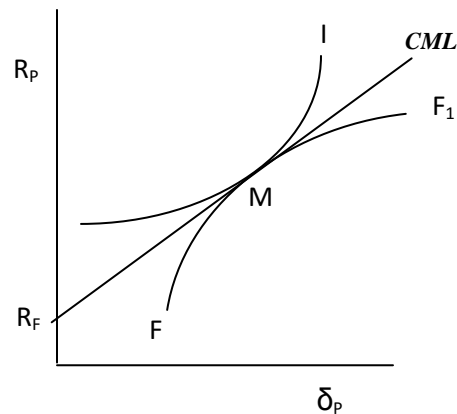


Fig.6



In the construction of the CML, the utility preferences of the individual affect only the amount that is borrowed or loaned; they do not affect the optimal portfolio of risky assets. Thus, the individual's utility preferences are independent or separate from the optimal portfolio of risky assets. This condition is known as the separation theorem; it states that the determination of an optimal portfolio of risky assets is independent of the individual's risk preferences. Looked at from another angle, the introduction of risk-free security in **Fig.6** implies that only M amongst all the previously efficient set of risky portfolio has survived the introduction in analysis of the risk-free security. The selection of a risky portfolio is, thus, separated from the problems of selecting a portfolio of risk-free and risky securities because there is only one optimal portfolio, which is the market portfolio at M.

In order for the investor to hedge against risk and also maximize return of his investments, the key fundamental remains the price of purchase of the securities which also should determine time and price of sale of such investment. This is very pertinent because investors purchase securities at different times (e.g year). In the risk-return trade off, emotional buying and selling of securities should as much as possible be avoided in the process of diversifying investment. The rationale investor should spread his portfolios amongst all sectors of the economy to minimize risk. In addition, investors are advised to consult a financial expert to assist in analyzing the financial statements of the organization before putting their money in securities.

MODULE THREE: CODE OF ETHICS AND PROFESSIONAL STANDARDS

3.1 INTRODUCTION: Ethics is one of those nebulous concepts that do not lend themselves to a broadly and generally accepted definition. It is relative and highly subjective Encyclopedia Britannica defines it as a branch of philosophy that is concerned with what is morally good and bad, right and wrong, a synonym which is illegal philosophy. However, morality and ethics are not the same.

What seems to be consensual about ethics is that it has to do with what is good or not good, what is morally right or wrong, what is acceptable in a given environment or not, what is expected or not of a person and generally means - the guidelines or rules of conduct by which we aim to live, in our homes, organization, place of work, church, mosque etc. Ethics is a branch of philosophy that is concerned with what is morally good and bad, right and wrong, a synonym for it is moral philosophy.

Whilst morality relates to personal beliefs related to religious and private considerations, ethics relates to standards expected of people, individually or as corporate entities. Ethics seeks amongst other things, to analyze, evaluate and develop normative moral criteria for dealing with moral problems.

Donalson and Werhare defines ethics as “the study of what people ought to pursue i.e. what is good for people or alternatively, the determination of which actions are right actions for people to perform”. Again ethical behavior must be distinguished from what is moral. Personal beliefs, often rooted in religious and private considerations, constitute morals. These attributes influence our attitude to work and our relationship with others. Ethics on the other hand comprises the standards expected of us, individually or as corporate entities.

3.2 OBJECTIVES OF CODE OF ETHICS AS IT RELATES TO INSURANCE

- (i) To set a standard for good insurance practice which insurance practitioners should follow in dealing with their customers

- (ii) To provide guidelines for insurance practitioners such that they will act fairly and reasonable on other banks and customers.
- (iii) To cause insurance practitioners to help customers to understand the operations of the bank.

3.3 ROLE OF CODE OF CONDUCT OF ETHICS

- (i) To ensure that there is compliance to principle that will ensure good practice.
- (ii) To set down principles which members/ employees will comply with.
- (iii) To promote and maintain confidence in the profession.
- (iv) To give guidance in case of conflict between self and company.
- (v) To assist members in upholding dignity, reputation and good standing.
- (vi) To harmonize the concept of social responsibility.
- (vii) To resist and prevent undesirable practices.

From the foregoing, it may be said that ethics has to do with the idea of what is good and what is bad. In relation to the banking and insurance business, the ideas of ethics or ethical issues are usually pushed to the back-burner. It was once said that morality has no place in the business.

3.4 REASONS FOR GOOD ETHICAL BEHAVIOUR

But, all said and done it pays to be ethical in whatever one does as a banker and insurance worker because of the following reasons:

- (i) Insurance/Bankers are trusted and as trustees they owe fiduciary duties to their customers.
- (ii) Insurance/Banking business thrives on confidence and professionalism. The confidence will be eroded if the industry is characterized by unethical behaviours.
- (iii) Insurance/Banking as a sub-sector of the country is a jugular vein that must be cut by the razor of corruption and some other unethical practices.

3.5 UNWHOLESOME BEHAVIOURS that may be termed unethical in relation to the insurance and by extension the financial services industry in Nigeria are listed below:

1. Collusion with outsiders or customers by staff to defraud the bank.
2. Issuance of cheques through another branch on their accounts without sufficient balance.
3. Borrowing of money from the bank's customers by some staffs.
4. Alteration of documents.
5. Falsification of account records to cover up fraudulent acts.
6. Breach of duty of secrecy.
7. Sexual harassment of female staffs.
8. Truancy at work.
9. Engaging in private business whilst in employment in the bank.
10. Lending bank's money to members of one's family.
11. Love affairs between opposite sex.
12. Using vulgar languages.
13. Conversion of bank's property for private use.
14. Improper opening of accounts.
15. Abuse of general expenses account

3.6 The LEVEL OF ETHICS EXHIBITED BY A FINANCIAL SERVICES WORKER MAY BE INFLUENCED BY THE FOLLOWING VARIABLES.

Integrity

This means honesty, fair dealing and truthfulness. it is a prerequisite for ethical behavior in all aspects of enterprises. It imbues into individual the desire to do the right thing, to adhere to and live up to set values and expectations. This is show in the willingness to forgo immediate self interest for long term interest of enterprise or society.

Competence

This is desired demonstrable level of knowledge, experience and skill needed to carry out a function or job.

Moral values

These are virtues, roles and regulations which the society hold dear as the basis of its continued existence.

Legality

The existence of laws which prescribe minimum level of moral or ethical behaviour.

Deregulation

Government quality that engenders competition which in turn throws professional virtues to the dogs.

Greed

Inordinate desire to possess.

Honesty

This implies a behavior that frowns on the telling of lies and fraudulent dealings, it means uprightness and truthfulness.

Ignorance

Lack of knowledge and inadequate understanding of situations which can lead to immoral actions and inactions.

Environment

An environment polluted by deep poverty and endemic corruption is a fertile ground for unethical behaviour. Ethical behaviour maybe situational.

Self preservation

A manager want to keep his head at times by doing his master's bidding, if the master wants a particular goal achieved, this, the manager must do first. The issue of whether it is ethical or not is secondary.

3.7 MALPRACTICE FROM BANKERS PERSPECTIVE

A malpractice from a banker's point of view includes but not limited to an act not generally accepted or illegal. It is a conduct which deviates from rules and regulations as well as societal norms. It is an abnormal occurrence which may include falsification or mismanagement. It may also mean any act not in accordance with statute which conveys untoward benefit on the practitioner by taking advantage of his client. It is all abuse of office, any action on the part of a banker or customer that is contrary to banking rules.

Advance Fee Fraud

By this malpractice, a customer approaches a bank with an offer of access to large fund of below market interest rate and other favorable but fantast terms. He does not disclose the source of the fund except on terms Fee or commission payable in advance. He collects the money and disappears into thin air leaving the bank in a lurch.

Cheque kiting

Kiting is a method whereby a depositor utilizes the time required for a cheque to obtain an unauthorized loan with any interest charge. Cheque kiting involves the authorized use by depositors of uncollected funds in their account without any movement interest.

Account Opening Malpractice.

Customers do open bank account at times with sole aim of defrauding the bank. This may take the form of fraudulent letter of credit which may be opened and paid.

Counterfeit securities

These usually involve fake commercial financial instruments or counterfeit copies thereof.

Cheque/Dud cheques

These may relate to personal, business or government cheque. They may involve traders' cheques certified, draft and writer cheques with each having its own characteristics and vulnerabilities for fraudulent, illegal alteration, forgery and counterfeiting.

3.8 The BOFIA 1991 contains some provisions which, if adequately enforced can ensure good and acceptable ethical practices in the banking industry, some of these provisions are:

- (i) S.7 of the Decree empowers the CBN to grant prior approval to any bank before it can fundamentally effect any change in its structure, ownership and control

and management by mergers, reconstruction or employment of management agents to run the bank.

- (ii) Section 18 makes disclosure of interest by directors, managers and officers mandatory and provides punishment in the form of fine or imprisonment for a term of three (3) years for noncompliance.
- (iii) To prevent abuse of grant of loans and advances, the section prescribes that no manager or other officer in the bank shall have interest in the loan he advances and if he was, he shall disclose same to the bank.
- (iv) The section also prescribes that loan and advances shall not be made unless they are granted in accordance with the rules and regulations of the bank. Where such rules and regulations require security, such security shall be given before the grant. The section also prohibits the manager or officer from benefiting from any loans or advance granted by him.
- (v) S.20 (1) restrict the size of an advance to one person .No bank is permitted to grant any loan or advance to one person. No bank is permitted to grant any loan or advance that is more than 20% of the shareholders fund unimpaired by losses.
- (vi) Section 23(1) makes it obligatory for banks to display their interest rate to protect their customers from artificially created monopoly power.
- (vii) By s.16 and 17, banks are required to maintain and add to their statutory reserves before paying any dividend to ensure that the proprietors do not engage in fraudulent bankruptcies.

3.9 FACTORS INFLUENCING HIGH ETHICAL STANDARD

- (i) Public / Full Disclosure: Publishing of the organization account for the public, public awareness, media coverage, better communication
- (ii) Increase public concern through discussion in the media, meetings and conferences, societal pressure
- (iii) Government regulation – obeying government regulation, legislation, and intervention, federal courts.

- (iv) Reporting suspicious transaction to the regulatory authority e.g money laundering. This helps to prevent advances fee fraud and other related offences. It help to stop institutions from engaging in advance fee fraud.
- (v) Education of business managers, increase in managers professionalism and education
- (vi) Business's greater sense of social responsibility and greater awareness of the implications of its acts; business responsiveness, corporate policy changes; top management emphasis on ethical action.

3.10 FACTORS CAUSING LOWER STANDARDS

- (i) Society's standard are lower; social decay, more permissive society; materialism and hedonism have grown; loss of church and home influence; less quality; more quantity desires.
- (ii) Competition, stress to succeed, current economic conditions, cost of doing business, more businesses compete for less.
- (iii) Political corruption, loss of confidence in government
- (iv) People more aware of unethical acts; constant media; TV; communications create atmosphere for crime.
- (v) Greed; desire for gain; worship of the dollar as measure of success; selfishness of the individual; lack of personal integrity and moral fiber
- (vi) Pressure for profit from within the organization from superiors or from stockholders; corporate influences on managers; corporate policies

3.11 CODE OF ETHICS AND PRACTICE FOR THE NIGERIAN INSURANCE INDUSTRY

I would dwell on some of the general rules in this paper while not undermining rules of insurance intermediary, underwriting practice, claims and loss Adjusters. The general rules run across all of them.

- (i) The business of insurance is founded on the principle of utmost good faith. Insurance practitioners and companies in whatever aspect or class of insurance must put service

above self and should always endeavor to employ the most effective and economical ways of doing their business.

- (ii) A member shall not demand or accept any bonus or commission or part of the profits, fees or remuneration belonging to another professional body.
- (iii) A member, at all times, should avoid being placed in a position of conflicting interest.
- (iv) A member must, at all times, preserve impartiality. Any of his/her view that might impair or likely to impair his impartiality, should be declared to his client before he proceeds to act.
- (v) Every member shall always be transparently honest in all his business and professional dealings and shall at all times, refrain from unethical, fraudulent and corrupt practices.
- (vi) A member shall not improperly ask for or accept any financial gain, property or inducement or benefits or advantage of any kind for himself on account of anything done or to be done by him in the normal discharge of his duties.

3.12 MALPRACTICES IN THE INSURANCE SECTOR

Hitherto, the Old Pension Scheme caused a lot of pains to Nigerians because of unpaid claims of workers at Local, State and Federal levels which was most times in arrears and unpaid. Will the new Pension Scheme meet the expectation of Nigerian considering the fact that the new scheme has already witnessed complains from workers in the oil sector? Secondly, there is a reported pending case of unaccounted missing money (billions) from the new scheme. However, with the new Pension Reform Act now running it is the expected that the demerits of the old scheme will be put right by the new pension act.

The following are examples of malpractices in the insurance industry:

- (i) Frauds occur regularly in motor insurance where clients forge documents of non-existent vehicles, and claims are made afterwards. Motor class of business probably records the highest number of fraud which is not unusual, as motor insurance business contributes the greatest gross premium income of most

insurance companies and the industry in general. Fraud in motor insurance is worse these days when most insured vehicles are second-hand or “Tokunbo” as they are popularly known, whose values are not properly determined and every new vehicle proposal is treated as new, even when the vehicle would have been over ten (10) years old..

- (ii) Documentary fraud in Marine insurance includes forged original bills of lading, forged or fictitious invoices, forged or altered customs Bills of Entry and forged certificates of origin.
- (iii) All classes of insurance experience malpractice of one sort or another, and proportion to the value at risk at the time of loss. Fire, Burglary and Accident insurances experience high fraud rates as insured are known to have deliberately set fire on dilapidated insured property just to dupe insurers.
- (iv) One of the most worrying malpractices in insurance is “Rate Cutting”. Some brokers and insurances engage in this malpractice which results in the insureds paying less premium to the insurers than is realistic to cover an insured risk. Through rate cutting, insurers lose substantial funds to the detriment of the National Economy
- (v) Some insurance intermediaries i.e brokers and loss Adjusters and Employers in the present Pension scheme specialize in withholding premiums collected on behalf of insurers and operators under the pretext that periodic accounts are rendered to insurers, while a few others have been known to cook proposals for non-existent risks, paying the premium with the intention to make high claims soon after.

3.13 PRE PENSION REFORM ACT – It was faced with:

- (a) Unfunded and inadequate budget allocation
- (b) Unsustainable outstanding pension liabilities estimated at N1 trillion in the public sector.
- (c) Demographic shifts and aging made defined benefits scheme unsustainable.

- (d) Many workers not covered by any form of retirement benefits arrangements pension schemes had been largely unregulated with highly diversified arrangements were 'resignation' than retirement scheme.

3.14 THE RATIONALES OF THE NEW PENSION SCHEME

- i. Most public sector schemes were unfunded
- ii. Unsustainable pension liabilities
- iii Weak and inefficient administration of schemes in both public and private sectors
- iv. Demographic shifts and aging make defined benefits schemes unsustainable
- v. Many workers in the private sector were not covered by any form of retirement benefits arrangement
- vi. Existence of diversified arrangements which were largely unregulated in the private sector.

3.15 BENEFITS OF THE NEW SCHEME

- i. Pensioner is assured of regular payment of retirement benefits.
- ii. Contributor (in the private and public sector) has the freedom to choose who administers his retirement benefits account.
- iii. Enhances transparency in pension administration.
- iv. Stems further growth of pension obligations. The reduction in qualifying period for 10 years to 5 years and 15 years to 10 years for gratuity and pension as exacerbated pension liabilities.
- v. Creates a huge pool of long term funds and is a solid foundation for economic development.
- vi. It would reduce the crave for government job and encourage more private sector participation in the economy especially employees in the public sector who hitherto held to their jobs as long as they wanted by falsifying their ages.

- vii. The new Pension Reform Act will reduce some political risk by moving pension plans outside the direct control of government intervention. It will also permit individuals who have enough account to decide when to retire.

3.16 FEARS AND UNCERTAINTIES OF THE NEW PENSION SCHEME

According to Nwude (2010), the following unanswered questions always bug the minds of potential retirees:

- (i.) Are the managers of these PFAs and PFCs men and women of integrity?
- (ii.) Are they not grand and clean-looking thieves and fraudsters?
- (iii.) Are there legal instruments in place to protect the workers in case their savings are stolen in the future?
- (iv.) Has the failed bank tribunal recovered the fortunes and savings of the masses entrusted in the care of the failed banks and paid the depositors?
- (v.) Do the pension managers and custodians have the ability to deliver robust returns in a narrow and shallow investment environment?
- (vi.) Can our financial markets provide the absorptive capacity to absorb the estimated yearly pension contribution of over N100 billion? The stock market crash in the wake of global financial crisis between 2008 to 2010 affected the investment funds of retirees.
- (vii.) How can we be sure that there would not be the story of failed pension, after having served one's fatherland for 35 years or more? The new pension scheme is seen in some quarters as a hazy and haphazard scheme which puts the future retirees into the hands of private institutions with no proven and tested record of credibility, transparency and accountability.
- (viii.) What is the assurance that these new PFAs shall not crash their companies like the finance companies of the early 1990s? That is the "wonder banks".
- (ix.) What happens if the new scheme goes the way of the National Housing Fund scheme?

3.17 RECOMMENDATION FOR PROMOTING HIGH ETHICAL STANDARDS

Business leaders have a duty to create a moral environment for institutionalizing ethics by:

- (i) demonstrating honest commitment to the ideals of ethics;
- (ii) recognizing and playing a role model by their actions, inactions and value judgments;
- (iii) being consistent, fair and even handed;
- (iv) the promotion of an ethics – training programme;
- (v) the establishment of a credible and functional ethics committee;
- (vi) designing and installing a compliance programme that the institution operates within the ambit of the laws, regulations, the value system and the norms of the industry and society.
- (vii) National Insurance Commission should be more aggressive in enforcing cases of misconduct.

