

**BUILD-OPERATE TRANSFER (BOT)  
FACTORING METHOD:A FINANCING  
SCHEME FOR CONSTRUCTION PROJECT**

**BY**

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A Thesis submitted to the Department of Building, Ahmadu  
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for the award of the Degree of Master of Science in Construction Management

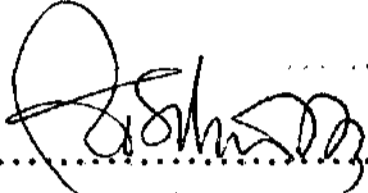
JULY, 1998.

DEDICATION

This work is dedicated to God Almighty and to my great mother  
Ms. S. K. Mavira.

CERTIFICATION

This thesis entitled BOT-FACTORIZING METHOD: A FINANCING SCHEME FOR CONSTRUCTION PROJECTS by Kuroshi. A. Peter. Meets the regulations governing the award of the Degree of Master of Science in Construction Management of Ahmadu Bello University, Zaria and is approved for its contribution to knowledge and literary presentation.



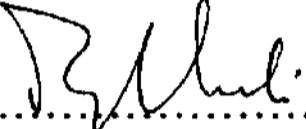
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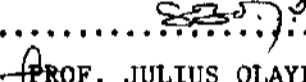
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ABSTRACT.

Public Sector Construction projects In Nigeria are usually beset with the problem of finance; quantum reduction and erratic releases of cash are common. It is usual to find that the projects fall into the category of start and stop or non-commencement, despite budgetary allocations. The use of alternative means of financing some of these projects is an imperative. And the aim of this study is to present one of such alternative, I.e. the BOT-Factoring method.

BOT have been a well tried method of construction project financing by Governments. A scheme where Private Sector resources are used in executing Public Projects.

An appraisal of a project for a BOT scheme, involves the following:

- (i) estimating the project's cost,
- (ii) income estimation and the determination of the project's economic viability,
- (iii) determination of the concession period, and
- (iv) establishment of a safeguard. These constitutes the framework of the study.

BOT schemes affords a Project Owner the opportunity to embark on a project whose financial requirements are beyond the project owner's capacity.

The funds for a BOT project are usually long-term loans sourced from the Private Sector.

This study has identified inadequacy of long-term loans in the Nigeria's financial, market as a constraint for an effective BOT scheme. Thus, harmonising the benefits of BOT and Factoring is believed will address this constraint.

The benefits of Factoring; viz, cash advancement and debt collection have been applied in developing the BOT-Factoring concept.

Simple economic analysis was carried out, to determine the suitability of the concept. The analysis is against the backdrop of the basic requirement of free market economy where project selection largely depends on numerical indicator's of the project costs and returns based on market prices i.e the prices at which goods and services are traded.

The application of the concept was upon the basic premise of the cash situation of a project.

It is here concluded that benefits of BOT-Factoring include the use of cash resources other than the Project Owner's own funds and the accommodation of erratic time of cash release that will cause time-overrun during project execution.

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## GLOSSARY

**BASIC COST LIMIT:** This is the maximum sum of money that can be spent on a building and its external works. It covers the following:

- (a) Substructure (excluding abnormals), (b) Superstructure and finishes, (c) Fixed furniture and equipment, (d) Mechanical and electrical services (e) Building drainage, (f) The building's external works, (g) Contractors preliminary cost.

**BOND:** A written promise to pay or repay a sum of money; it is sold by firm into the financial market, by which the firm receives immediate cash proceeds in exchange for a promise to pay a certain sum (the face value of the bond).

**BUDGET:** An itemised listing, and frequently the allotment, of the amount of all estimated revenue a given business anticipate receiving; and the listing and frequently the segregation of the amount of all estimated costs and expenses that will be incurred in obtaining the above mentioned income during a stage period of time.

**BUDGET ESTIMATE:** Is the approximate cost or value of project of which an authority planned to spend.

**BUDGET GRAPH:** A graphical illustration of income (revenue) and expenditure for the purpose, to ease the co-ordination of the financial plans and estimates in advance; in order to enable the user to check up actual with projected operations, and to provide for discrepancies as they occur.

**CAPITAL MARKET:** A place or system in which the requirements for capital of a business can be satisfied.

**CAPITAL OUTLAY:** Expenditure for the acquisition of or addition to fixed assets. Included are amounts for replacements and major alterations but not for repair.

**CASH FLOW:** Cash flow here refer to the flows in both direction of actual money (currency, cheques etc.)

**COUPON:** Certificates attached to a (Coupon) bond which represent sums of interest due at stated maturities, which the bond promises to pay. Coupons are negotiable instruments which state that the debtor organisation (issuer or obligator) through its paying agent, usually a bank or trust company to the bearer at maturity, a certain sum of money representing the interest due for a stated period upon bond No..., of a specified issue.

**COUPON RATE:** This is the fixed price on a detached section of a bond, entitling compress holder to claim interest.

**CREDIT RISK:** The risk assumed for the possible non payment of credit extended; varying from practically zero to a large percentage.

**CREDIT TERMS:** Specification of the terms for the payment of a credit obligation.

**FACTOR:** A legal entity i.e person or corporation who carries on business transactions for another.

**FACTORING:** Is the function that involves credit collection, purchase and recovery of debts, sales ledger administration usually offer by an agency to client.

**FEASIBILITY STUDY:** Determine whether or not a proposed development will be a profitable venture.

**FREEHOLD:** Refer to the situation where in the owner is in absolute legal possession of a property.

**FREE MARKET:** Generally, the open market where prices are determined by free and open competition between buyers and sellers, where volume and prices are free to express truly the prevailing conditions.

**GUARANTOR:** A surety; one who guarantees payment. A person, firm, or corporation that may agree to guarantee a ~~note~~ for another party and ~~become~~ liable by endorsement to pay the obligation of another in an event of failure or default of the original maker (principal debtor).

**INSTRUMENT:** A general term to denote any kind of document in writing by which some right is conferred or contract is expressed. Practically all documents used in finance e.g. check, draft, note, bond, coupon, stock certificate, trust deed, trust receipt etc.

**LEASE:** A form of contract transforming the use of occupancy of land, space, structures, or equipment, in consideration of a payment usually in the form of rent. Leases can be for a short period or as long as life.

**LEASE BACK:** A situation when a seller remains in possession as a tenant after completing the sale and ~~delivering the deed~~.

**MATURITY:** The terminating date of a note, time draft, acceptance, bill.

**MIX-FINANCING:** is the use of more than one source of funds in financing a venture.

**OPERATOR:** This is the construction project developer that co-ordinates the whole project from concept through its operational stage when the facility is generating revenue to pay back funds invested in its acquisition.

**PARETO ANALYSIS:** A concept developed by Vilfredo Pareto, a 19th century economist who worked with income and other unequal distributions.

The basic concept behind a Pareto Analysis involves the ranking of data in descending order. It is designed to identify inequalities. A diagram which accompany such analysis is a bar graph that separates data into "Vital few" from "trivial many", this enables the analyst to select areas that should be addressed first.

**REDEMPTION:** Act of redeeming a debt; payment of a debt, retirement of a debt.

**RECEIVABLE:** Are claims of various type held by an entity for the future receipt of cash, goods or services.

**RECEIVERSHIP:** A State a business entity's income or revenue depends on payment of credits on goods earlier taken without paying for such by customers.

**RECOURSE:** Here refers to, help provided by bearing of risk associated with default, for example, for non payment of loans.

**USER-CHARGES:** Fees or payment for benefits derived from the services of a system or product.

1:1 Background to the Research

Construction Projects like any other human endeavour, requires the precise expression and subsequent adoption of strategy to accomplish the works involved in the project. The strategy is what is termed planning.

Planning is defined by Oberlender (1993, pp. 9) "as the formulation of a course of action to guide a project to completion which starts at the beginning of a project, with the scope of work and continues throughout the life of the project."

Cooke (1988, pp. 1) stated that "the planning process has been developed around the construction stages of pre-tender, pre-contract and contract planning."

Finance is among the most important items of consideration in a strategy for any project. Financing aspects of strategy are often regarded as a financing plan.

Akwaeze (1988, pp. 46, 47) said, that:

a financing plan is an arrangement or scheme of procuring the necessary fund required to finance or execute a business (construction projects inclusive). The designing of the plan entails two separate exercises; viz,

- (a) The actual identification of the sources of the finances required especially where more than one source is contemplated,
- (b) The splitting of the total fund needed into absolute proportions between the identified sources.

Usually construction projects are subject of construction contracts where the contractor agrees for valuable consideration (usually monetary)

to carry out building or civil engineering works for a Project Owner. It is believed that the Project Owner must have assessed the financial implications of the project before embarking on it, and is prepared to meet the payment obligations. Such financial requirements for the project can only be met when a good financing plan is prepared.

A typical financing plan might stipulate a sole sponsor or multiple sponsors for the project. Sponsorship other than by the Project Owner would be required when the owner is unable to provide wholly the required finances. There could be other reasons for multiple sponsorship, some of which are given by Price (1995 pp. 48) as;

- (a) to enable the Project Owner embark on a project which would have been impossible without other sponsors. The Project Owner thus receives the benefit of a large capital assets without having to finance it alone,
- (b) to minimise the Project Owner's financial commitments; financing via loans, attracts investors from either the Private or Public Sectors,
- (c) part of the risks associated with the financing of the project, can be shifted from the Project Owner unto Co-sponsor(s).

Public Sector Projects are peculiar in the sense that, they are initiated in anticipation of a steady capital allocation. But experience have shown that most of the budget parameters; mainly estimated revenue and expenditure, for projects are not dependable. Such unreliability is manifested in either drastic reduction in the expected allocation or lack of commitment for a considerable length of time. Usually such projects compete with a host of other economic activities of the Government for the limited financial resources available. The funds required are seldom available before the project takes off. Thus, arrangements have to be made to ensure steady

cash flow especially at the construction stage; usually it is at this stage that, the bulk of the funds stipulated in the budget are expended.

Financing plans are thus inevitable. After establishing construction project cost, the plan should relate the funds available to the many activities or operations in the project, to enable the establishment or identification of the likely periods when the Project Owner's allocation will not be adequate and alternative arrangements need to be made.

Conclusively, therefore for a large number of Public Sector Construction projects cashflow requirement create a need for alternative sources of funding. The financial plan should incorporate this need indicating when such will be necessary.

The study envisages the advantage/benefits accruing from proper financial planning of construction projects, it will therefore present a relatively new method for financing construction projects.

#### **1:2 Aim and Objectives**

##### **Aim:**

The aim of the research work is to present, Build-Operate - Transfer (BOT) - Factoring as an alternative means of construction project financing, where client's funds are inadequate in time.

##### **Objectives:**

The objectives set to achieve the above aim are:

- (a) expounding the basis for construction project financing,
- (b) highlighting the prospects of BOT-Factoring for the Public Sector in Nigeria, based on the conditions for use,
- (c) carrying out a case study of the Public Sector Project in order to determine the usability and applicability of BOT-Factoring

with respect to the prevailing conditions of the Public Sector,  
and the requirements of financing institutions.

(d) establishing the model; BOT-Factoring as a means of construction project financing.

### 1:3 Significance of the Research for the Nigerian Economy.

This study demonstrates how simple financial management skills within the ambit of basic rules of economics, will be useful in pooling financial resources and channelling such to the needy areas in the building construction delivery process.

Build-Operate - Transfer (BOT) and Factoring are already existing methods of project financing but with limitations. Individually, they are unsuitable to certain projects due to the peculiar conditions surrounding such projects. Integrating, Factoring in BOT will result in an extension and subsequent improvement on their use as methods of construction project financing. Thus, this research will suggest another but an integrated way of tackling the problem of financing construction projects in the Public Sector in Nigeria on an horizon of 5-10 years from now, assuming the widening of free market rules in the construction industry.

### 1:4 Scope and Limitations

The scope of this research is an appraisal of BOT and Factoring as a method of construction project financing, with the view of harmonising the benefits of BOT and factoring for application on construction projects. Taking cognizance of the prevailing financial environment.

The application of BOT-Factoring method has been limited to typical projects of a Public Sector Unit.

### 1:5 Research Methodology

This research is descriptive, specifically it is a research based

on case studies; two case projects were studied.

Rent values and Project costs of some facilities in one of the projects, named case Project One were used to determine the usability of the method; as a means towards that, basic Pareto analysis was carried out based on payback periods (also determined) and project costs.

Planned and actual schedule of payments of the second case project, named case Project Two were used to determine the applicability of the BOT- Factoring method . Estimatin of the financing requirement of case project Two, was a means towards the application,

The data used to determine the usability of BOT-Factoring method, are published data from the Project Owner with the exception of rent values (of alternative or similar facilities in case Project One) obtained through personal interview based on structured questionnaire from local estate agents. And in order to determine the applicability of the BOT-Factoring method, data from contractor's records were used.

## CHAPTER 2

### 2:0 CONSTRUCTION PROJECT FINANCING

This chapter is a presentation of information from relevant literatures. The chapter begins with an exposition of the basis of construction project financing. It discerns the characteristics features of cashflow.

An overview of construction project financing, highlighted certain instruments and models of project financing.

The concept of development banks and project financing were discussed.

Established in this chapter, is the general trend or mode of construction project financing in a situation where a client lacks the capacity of pulling the project to completion due to financial constraint.

Also in this chapter, BOT and Factoring were reviewed separately establishing both methods of financing as means for financing tasks requiring funding.

Separate exposition of the methods was carried out in the line of; concept and philosophy, practical procedure, needs and prospects; and limitations. The individual benefits of BOT and factoring were identified and presented also in this chapter.

### 2:1 Basis for Construction Project Financing

At the beginning of a new construction project, it is required that there is a financing plan, which will highlight the cash flow characteristics associated with that project. The general understanding of the principles of cash flow projection would determine whether alternative source of financing should be made or not within the project cycle. Cash flow projections could either be budget based or would depend on projections with relation to actual

expenditure.

According to Cooke and Jepson (1979, p.4), the movement of cash during a contract may be somewhat tentative from a budget based on an empirical S-curve generated by a plan of project financing. Alternatively, and with more confidence however, a forecast of income can be reliably associated with expenditure which implies cost incurred or to be incurred as illustrated in Figure 2:1 (adopted for this research). The graph displays two plots; the continuous curve for cumulative estimated value and broken lines for the cumulative actual value of activities on the project.

A curve in Akwaeze's budget graph can be likened to an empirical S-curve of a typical construction project. The continuous S-curve on the graph would therefore depict a graphical display of overlaps and sequences of cumulative total cost of the tasks (activities) constituting the project and the broken line would show the cumulative amount earned from works execution. The basic premise of the budget graph for construction, is expounded further with the following illustration:

Assume a project with information in Table 2.1 and relating such to the budget graph. In Figure 2.1

Theoretically, it may be interpreted that expenditure for the works are in batches. That, cash budgeted for an activity is expended wholly before the next activity; at the same time funds are expended for two activities as read off from Figure 2.1 and shown below in Tables 2.2

Table 2.1. Basic Activities of an Hypothetical Project.

ACTIVITIES	SEQUENCE	ESTIMATED EXPENDITURE	TIME (WEEKS)
Preliminaries	1	2,000	100
Frame Structure	2	16,300	7.2
Finishes	3	3,550	0.9
Retention fee	4	2,150	70.7

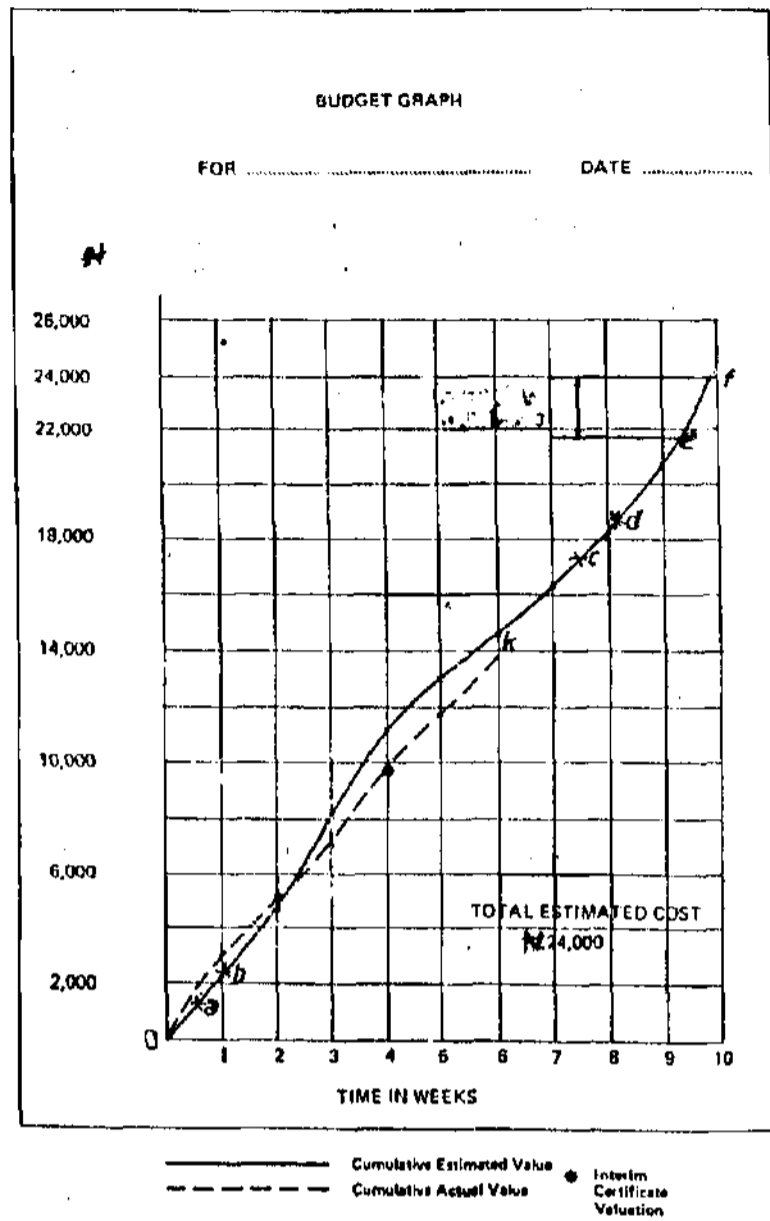


Fig. 2.1 Budget Graph: Illustrates Monetary value and time relationship  
(source: Adopted from Akwaeze 1995, pp 109).

Table 2.2. Overlap of Activities and Character of Expenditure for an Hypothetical project.

Length of time/period (Weeks)	Description
a-b	Funds to be expended only on preliminaries.
a-b	Portion of overlap; funds expended both preliminaries and frame structure
b-d	Funds to be expended only on frame structure
c-d	Portion of overlap; funds to be expended on both frame structure and finishes
d-e	Funds to be expended on finishes only
e-f	Retention fee to be released

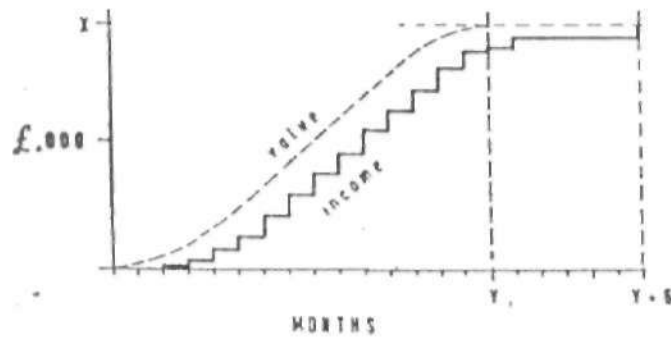
The plot O-K that is, the cumulative actual value, indicates that as at week 6, about ₦14,000 has been expended, which implies that allocations for preliminaries and about 75 percent for frame structure constitutes the total expenditure. The occurrence of actual expenditure usually implies positive cashflow; there has been income, in other words, funds were made available to settle costs incurred. The graphical presentation of a project's income is an aggregation of "steps" and "riser" as Figure 2.2 illustrates. The steps indicates times between incomes while the risers indicates the magnitude of income.

A project is said to be experiencing cash surplus when the Project Owner releases for the project, cash in excess of the value of workdone. The reverse is the case for cash deficit, that is, when the work done is in excess of the cash released by the Project Owner.

In free market economy, the characteristics of cash movement for a Public Sector unit project can be summarised as a "swing" between credit (when subventions are given, by the Project Owner) and debit (when work has been done but not yet paid) poles. Administrative bottlenecks in the Public Sector unit can be explained as the main reason for such inconsistency. That is, if lack of funds is not a reason; bureaucracy can lead to delay in the release of funds. This is not to imply that under normal circumstances, projects do not experience such deficits.

A project is said to be at the debit pole when it is experiencing cash deficit. Cooke and Jepson (1979, pp.41) asserted that certain contractual conditions may be the reason for projects being in cash deficit. They precisely stated that "a deficit is bound to occur when working under a J.C.T. contract conditions " because it stipulates the payment of contractors only after the specified works (part or whole) have been certified completed.

The cash situation of a project is ascertained by forecasting periodically, the choice of the period of analysis vary from weekly to monthly basis and subsequently throughout the project duration. Fig 2.3, illustrates the balance of cashflow at any point in time of the project cycle. The Figure integrates income and expenditure, highlighting the financial status of the overall project. The blocked portion of the plots indicate the time/stages when the project is in cash deficit: it is at this stages that the Expenditure curve (usually an S-curve) is above (implying a higher value) the "steps" and risers" plot for Income. But at point C, there is a cross-over resulting in the expenditure curve falling below the Income plot ( the hatched portion implying that the project is experiencing a cash surplus.



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Fig. 2.2 GRAPHICAL ILLUSTRATION OF A PROJECT'S VALUE/INCOME (source: Cooke and Jepson, pp.

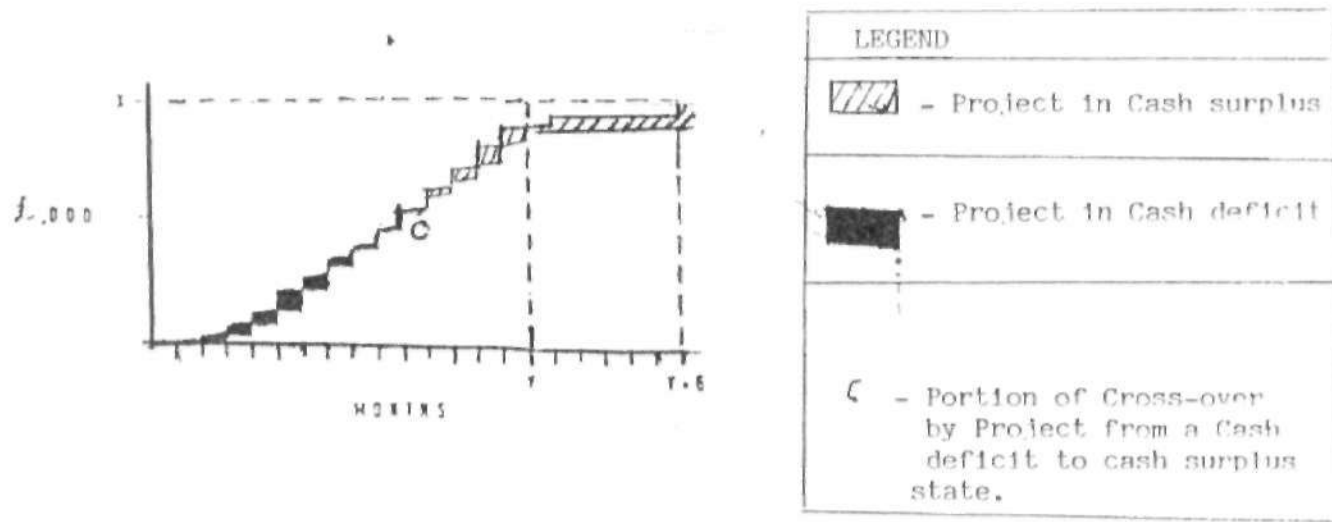


Fig. 2.3. Graphical Illustration of a Project's Cash situation (source: Cooke and Jepson; pp.

In general terms, a project requiring external financing in the form of loans, will ever be in cash deficit that is with respect to the Project Owner's total capital. Once work begins, the Project Owner's balance sheet will always reflect the debt owed until such a time that the debt used in financing the project is redeemed. Appraising the likely financial situation of a project on account of the estimated project expenditure and financial resources of Project Owner vis-a-vis the financing option available, creates the basis for making arrangements to providing or sourcing funds for the project before hand.

## 2:2 An Overview of Construction Project Financing in Practice.

### 2:2:1 Instruments of Construction Project Financing

At every crucial point of activity, any organisation should review critically its priorities for achieving certain goals; the goal of acquiring a built space is one of such. It is based on this assertion that a number of instruments of financing projects are looked into. Though there are many of such instruments, this review will dwell more on those used for financing Public Sector Projects.

The world bank publication of 1995 pp 34, 35 and Dalton (1957 pp 17-22) highlights some instruments used for financing public sector projects.

The instruments are summarised in Table 2.3.

Table 2.3 Instruments of Project Financing

1 World Bank	2 Dalton
Bond issue Development loan stock	Taxation . income . property tax . sale tax . road user tax Public utilities rates

Source: World Bank (1995, pp.34-35) and Dalton (1957, pp.17-22)

The following Tables 2.4 and 2.5 are examples of the funds raised for some public projects in Nigeria through the instrument outlined in Table 2.3.

Table 2.4 Debt-financed Public Projects in Nigeria

S.NO	Project	Security issued	Value (N,000,00)	Year
1.	Abeokuta Water scheme, Ogun state	Loan Stock	1,500	1986
2.	Lekki Peninsula Dev. scheme Lagos state	Loan Stock Revenue bond	300 600	1980 1988
3.	Adamasingba shopping complex Ilex Oyo State	Revenue Bond	300	1989

Source: World Bank (1995 PP 34-35)

in Dalton (1957, P.17-22), the funds raised through the instruments outlined in Table 2.3 are passed from one government authority to another by way of:

- (a) direct payment
- ((b) Loans
- (c) subsidies, and
- (d) grants

Such funds usually appear in the recipient's balance sheet as illustrated ;Table 2.5 below.

Table 2.5,,Major Sources of Finance (Credit Column) For Project Execution A At University of Jos.

Debit	Credit
Current spendings	Internal finance Federal Government Subsidy
Capital expenditure	External (donation, grants e.t.c) Finances:

Source: University of Jos Rolling Plan 1996-98.

The review above (sub-section 2.2.1) implies that Public Sector projects can be debt-financed.

There are certain models of construction project financing, developed to favour Public Sector unit against limiting conditions on the use of loans to finance construction projects.

The following section would be devoted to the review of some of the models.

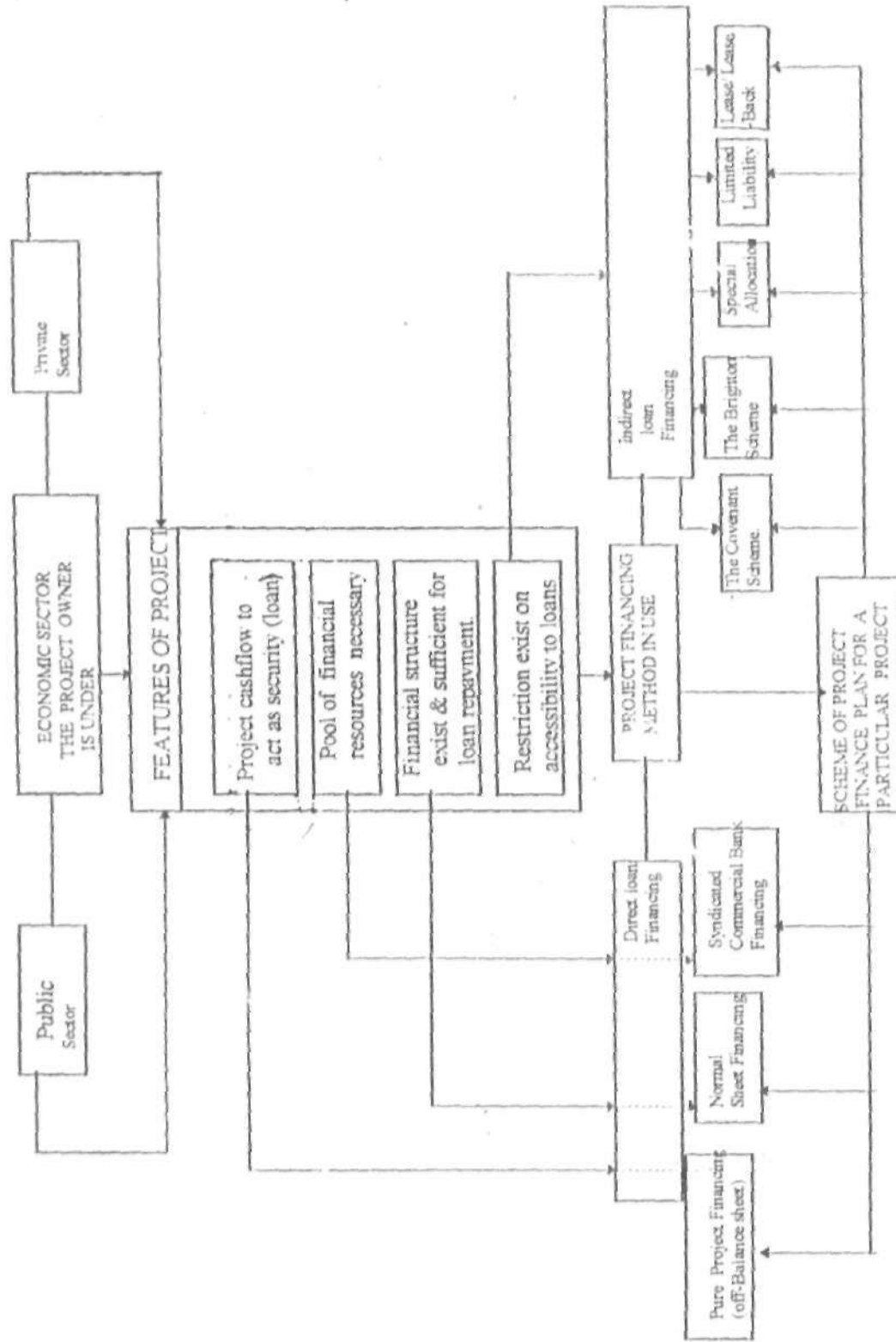


Figure 2.4: MODEL OF CONSTRUCTION PROJECT FINANCING  
 Adapted from: 1. Price, A.D.F. 1995, 2. Elliot, 1982

### 2.2.2 Models of Construction Project Financing

In countries with developed financial market, a consultancy firm when required, would set up a plan of project financing for a project taking into consideration the following

- (a) the specificities of the Project Owner's finances and the project's features, and
- (b) the methods of construction project financing in use in the country or the capital group the Project Owner belongs (i.e whether Public or Private Sector).

Elliot (1982, pp 35-36) and Price (1995, pp 47-48), outlined five and three models respectively of construction project financing. The Models based on the characteristics expounded by the authors (refer to Appendix A&B), are related to a Project Owner's financial background illustrated in Fig. 2.4 that is whether the Project Owner's activities are paid for using public or Private funds.

All the schemes highlighted in the Figure are supported by banks: as sources of the funds for project execution. In otherwords, loans provided by banks as an alternative to direct public funding, are used in the execution.

### 2.3 Development Banks and project Financing

The World Bank is not the only institution that assist in development projects; several other international agencies under the general name of Development Banks, provide extensive funding also. The U.N defines Development Banks as institution concerned primarily with long-term capital for development.

project.

Price (1995, P.61) opined that "Development projects, can be financed internally from a single source i.e government budget. This is not possible in developing countries as government funds are not regularly available. Thus, most development projects will have to be funded mainly from external sources. This assertion can be substantiated by referring to development projects funded by the World Bank in a number of developing countries. In Nigeria, quite a number of project are assisted by the World Bank; projects like the Akwanga-Keffi Water Project, the greater Onitsha Water Project. Others are the World Bank development loan package towards improving primary education in Nigeria.

The study looks at development in the perspective of physical investment; thus, Development banks that fall with this category are:

- a) Urban Development Bank (a domestic bank )
- b) African Development Bank (aregional institution)
- c) International Bank for Reconstruction and Development, and
- e) International Development Association (all World bank agencies);

The nature and character of there set of Banks are summarised in Table 2.6

Table 2.6:  
Characteristic of some Development Bank

INSTITUTION	GOALS	BENEFICIARIES	MATURITY/GRACE PERIODS(YRS)	SPECIAL FEATURES
Urban Development Bank (UDB)	Improvement of the inadequate *Social facilities and dwellings *Mass transportation *Public utilities	Public and Private sectors in Nigeria		Independent profit-making institution
African Development Bank (ADB)	*Provide human and capital resources. *Provide project/programm lending. *Co-finances projects with the World Bank, e.t.c.	51 African countries	12-20; 2-5 40; 10	
International Bank for Reconstruction and Development (IBRD)	*Promote economic development	Member states	15; up to 5	*Loans are usually on favourable and better terms than other sources; for priority projects
International Development Association (IDA)	* Promote economic development	Poorer developing countries	35-50	*More flexible terms *balance of payment are of less importance *No interest on credit facility *Service charge only 0.75 percent

(source: Price A.D.F., pp. 47-49)

#### 2.4 Basis for Developing a New Model of Construction Project Financing

The above review here lays the basis to identify the most appropriate instrument of raising finances for public project execution. The Public Sector rely on finances already sought by the Government either through loan stocks; bonds or taxation. Thus, Government largely obtain finances from primary sources, the resultant of which becomes a secondary source for Public Sector units towards their construction projects financing.

The study is interested in establishing a scheme with a ready source of finance. The process of raising finance via taxation mentioned earlier, do not imply a ready source that will suit the requirement of a construction project. Paying tax on the use of a facility before it is constructed does not seem appropriate either. The case should rather be "finished product financing" where the instrument of financing is the user-fee or user-tax referred also as the user-charge. The main advantage of user-tax is that it reduces (or eliminates) the perceived burden of over taxation and apathy towards payment of such tax. The risk of diversion of proceeds is subsequently eliminated. The user-tax is analogous to exchange value which is the price a user will offer for a product; a combination of value for benefits accruing from the use of a product and which of ownership bestows (that is when the product becomes an asset to the owner).

Since practically any instrument for raising finance in use raised finances, the significant question is which of the instruments will contribute most in raising the required finances. Mix-financing, that is using loan stocks or bond issue to raise the finances and user-fee or tax to retire such loans appears to be the most appropriate in a country like Nigeria.

The determinants of a method of financing are usually the following;

- (a) the source of finance (the institution offering a loan facility and the instrument it is using),
- (b) the characteristics of the construction project and;
- (c) the debt recovery factors (servicing determinants). Fig. 2.4 shows these determinants.

Any method of construction project financing ought to accommodate these determinants.

The purpose of this study as mentioned earlier, is to harmonise the benefits of two methods of financing i.e. Factoring and BOT, for a BOT-Factoring scheme which is also expected to accommodate the determinants ( a, b, & c above).

The following sub-sections in this chapter, are intended to provide an insight into the BOT-Factoring scheme.

### **2.5 Factoring Method of Project Financing**

Factoring has been established as a modern financing strategy whose origin can be traced to the colonial days in North America when commission merchants performed both the selling and the credit collection functions for British manufacturers.

Several authors and publications had used different phrases to explain the principle of factoring.

An Anonymous Author (1993, pp 112-115) explained that " factoring is a well established method of obtaining finance, sales ledger administration services, and/or protection from bad debts." Another, (1982, pp. 35-36) viewed "factoring as a method of releasing cash locked up in invoices.

And adduced that factoring is enjoying a surge in popularity because companies of all types and sizes are finding that they can have flexible access to cashflow with minimum interference in their internal operations."

The factoring service is an arrangement between a firm and a financial agency (company) under which the latter takes over the credit collection, purchase, and recovery functions of the former. Munachalam (1993, pp. 1077-1078).

#### 2.5.1 The Concept and Philosophy of Factoring

The concept of factoring, is to increase the working capital of a business entity, that is increasing the capacity of the entity to maintain its operation. It is a skill of financial management which approaches the question of inadequate finances from the point - of - view of credit.

According to Price (1995, p.6) Suppliers use factoring as a countermeasure to the abuse of trade credit by construction companies, the result to the assertion is undue delay of payments which had lead many smaller companies to the brink of receivership.

Often times, factoring is erroneously seen as a last alternative for organisations in trouble. In the contrary, factoring is based on the principle that firms who are 'smart' can shore up their capital (cash) based through factoring; which is the basic goal of factoring.

In Appendix C of this study, cases where factoring aid in improving business output are outlined.

#### 2.5.2 Basic Elements in a Typical Factoring Arrangement

The factoring process has certain basic elements in a typical arrangement as outlined by an Anonymous Author (1993, p. 112-115),

- a) Specified debts are transferred to the Factor (usually by assignment). The transfer may be of complete debtor balances or of all invoices relating to named debtors (perhaps subject, to restrictions on the amount that will <sup>be</sup> accepted from one debtor),

- b) The Factor offers a credit facility which permits the seller of debt requiring factoring services; to draw up to a fixed percentage of the face value of debts transferred. Normally, these advances are repaid as when the underlying debts are collected, often by paying the collected monies into a specially nominated bank account for the benefit of the Factor. Hence, conventional factoring provides finance that fluctuates with the level of trade credit extended by the seller. More complex arrangements may provide a continuous fixed level of finance.
- c) The Factor may also offer a credit protection facility (or insurance cover). This will limit or eliminate the extent to which the Factor has recourse to the seller for debts that are in default.
- d) The Factor may administer the sales ledger of the seller. Where such a service is provided, the Factor becomes responsible for collecting money from debtors and pursuing those that are slow in paying. In such cases, the fact that debts have been factored is likely to be disclosed to the seller's customers, though in certain situations, it may not be necessary.

A summary of the basic elements in a typical factoring arrangement is given <sup>by</sup> Figure 2.5

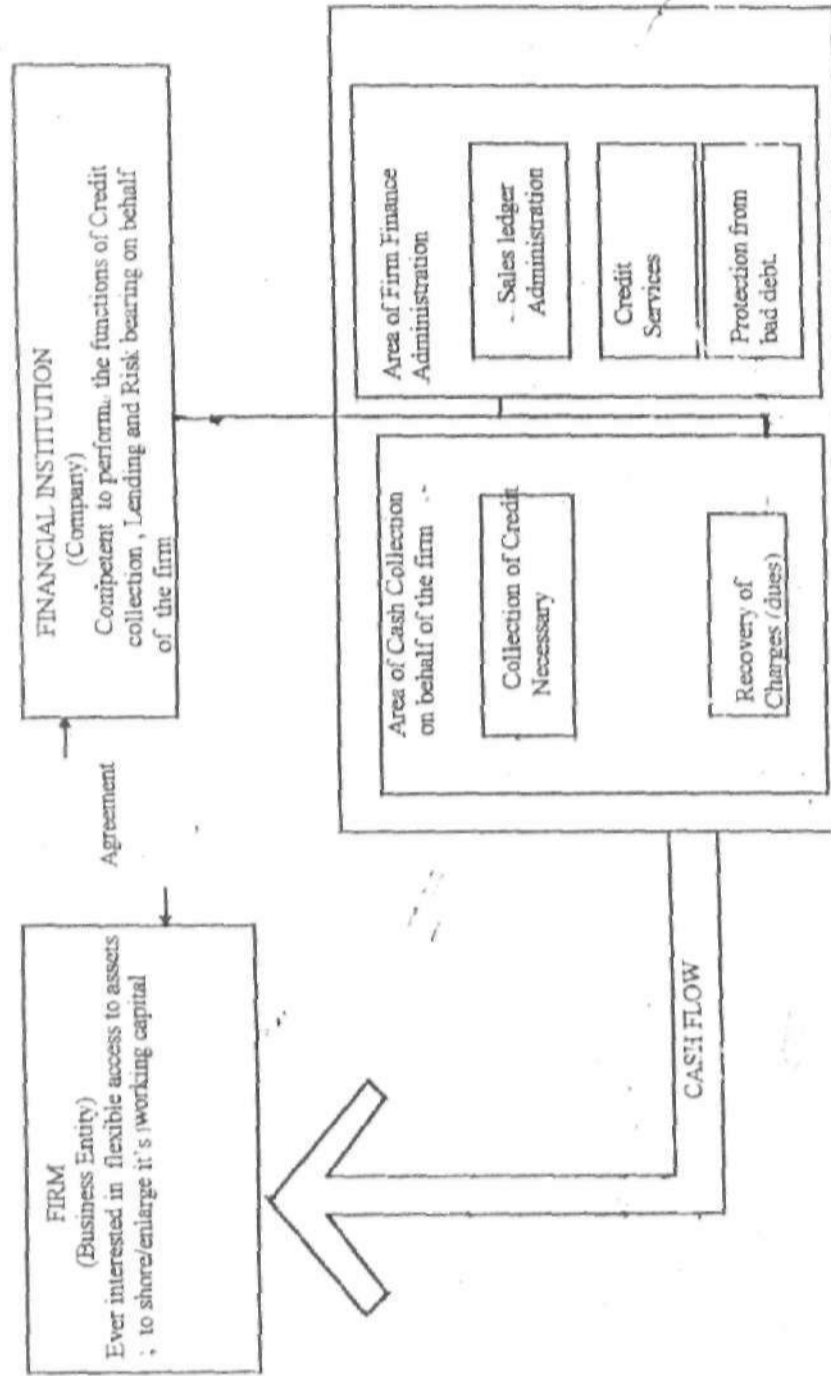


Fig 2.5 Basic Elements in a Factoring Arrangement  
source: Adapted from Accountancy, March 1993 pp 112-115

### 2.5.3 Practical Procedure of Factoring

The technique of Factoring can be summarised as consisting of three functions viz;

- a) Credit checking/collection
- b) Lending
- c) Risk bearing.

The procedure can be deduced from Arunachalam (1993, pp.1077 - 1078) who stated that factoring service is a "Package Deal." His explanation is from the perspective of a trading business (where factoring is widely used).

The mode of operation usually begins with the Firm selling a product on credit to identified Buyers. The Firm then negotiates with a Factoring Institution for a factoring relationship. The Factoring Institution (Factor) makes a credit check on the Buyers and in case they are found credit worthy, the Factor gives its approval, and sets a credit limit and maturity period. Invoices from the Firm on the sale of goods to the Buyers are despatched to the Factor which in turn gives the invoices to the Buyers and pays the Firm after retaining a margin. The retained amount is paid to the Firm after the Factoring institution recovers all its dues from Buyers.

The above submission is a generalised explanation of the factoring procedure. Basically, factoring comes in two forms, see Price (1995, pp 6-8) and illustrated in Figure 2.6 and 2.7.

- a) Service Factoring
- b) Undisclosed.

The service factoring involves a Factoring institution reviewing the debt and the credit worthiness of the Customers and pays the Supplier,

at the end of a specified period. The amount paid is equal to the value of the account receivable, less a factoring commission as fee. The fee is usually a function of the Factors' level of risk, the Supplier's turnover and the maturity period. Debt collection becomes invariably the responsibility of the Factoring Institution. The Customer need to be informed to deal directly with Factor for the recovery of the debts.

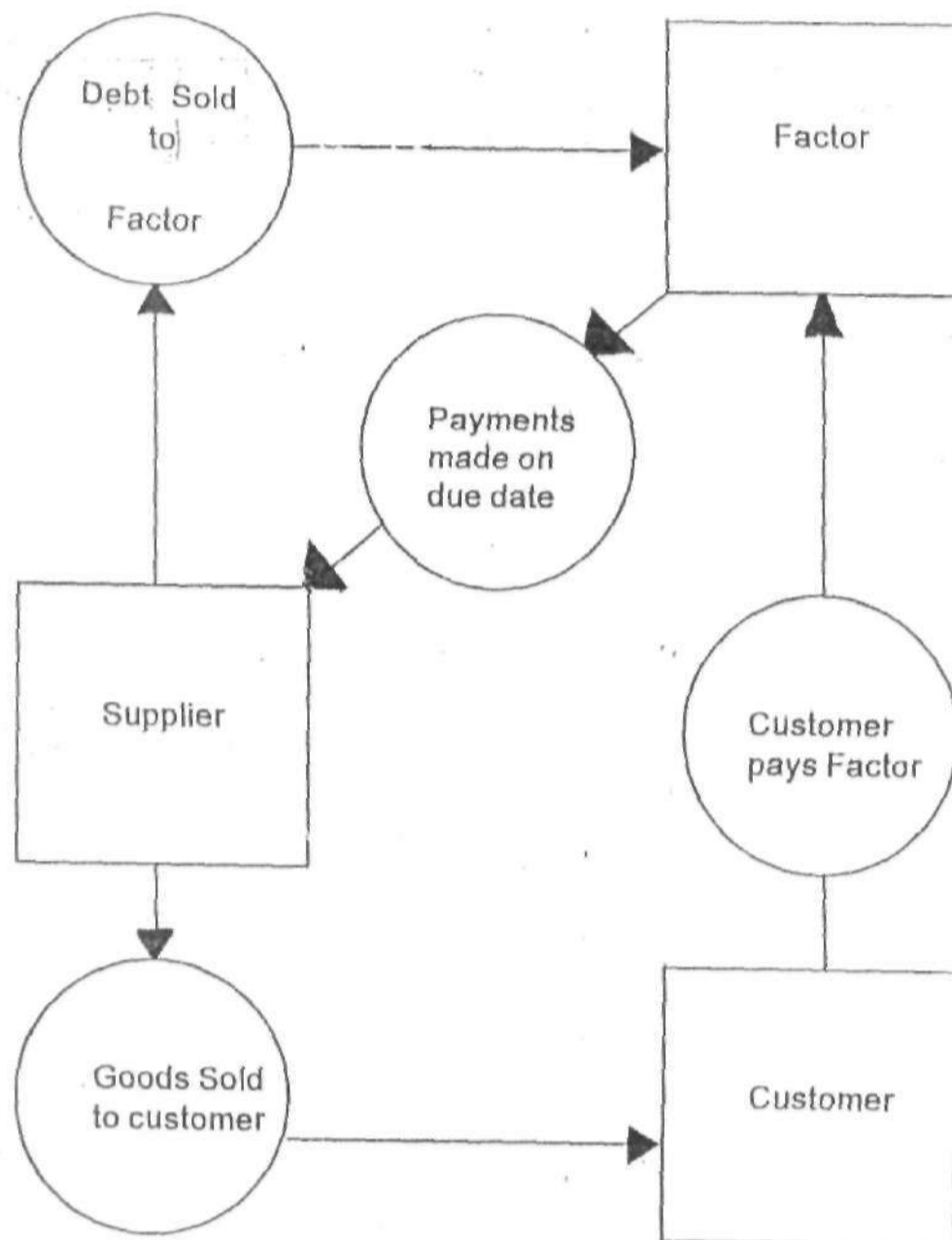


Fig. 2.6 Service Factoring Procedure  
 Source: Price, A.D.F: 1995, pp7

Undisclosed factoring on the other hand, is a special factoring arrangement whereby the use of factoring service is not disclosed to the Customer because some Suppliers do not want interference in the Supplier/Customer relationship. But such arrangement is disclosed when there is a breach of agreement on the part of the Client or when the Factor consider himself to be at a risk. Here the Client appoints the Factor, given such the responsibility of collecting payments (dues) from the customer.

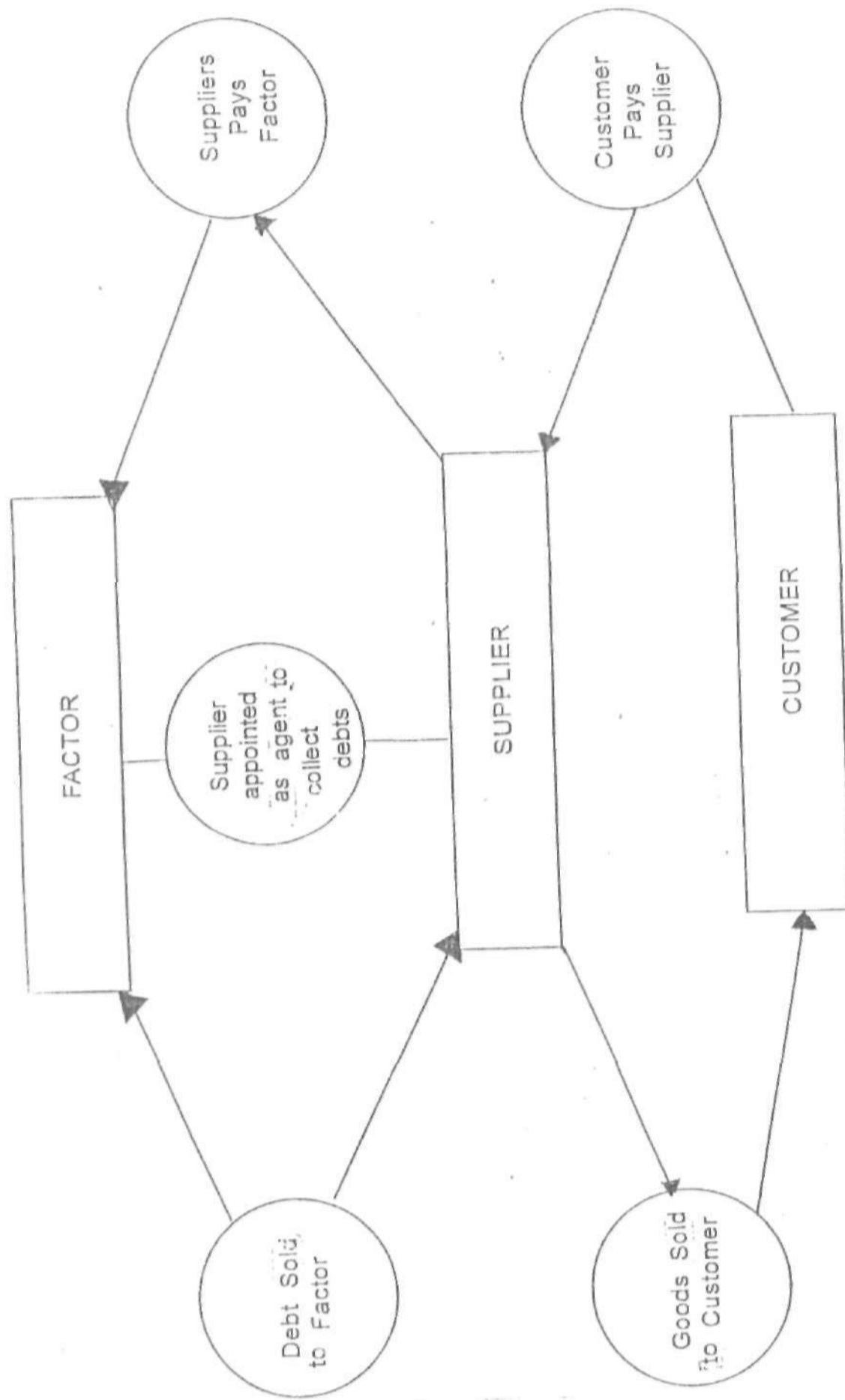


Fig.2.7 Undisclosed Factoring  
 Source: Price, A.D.F. 1995, p. 8.

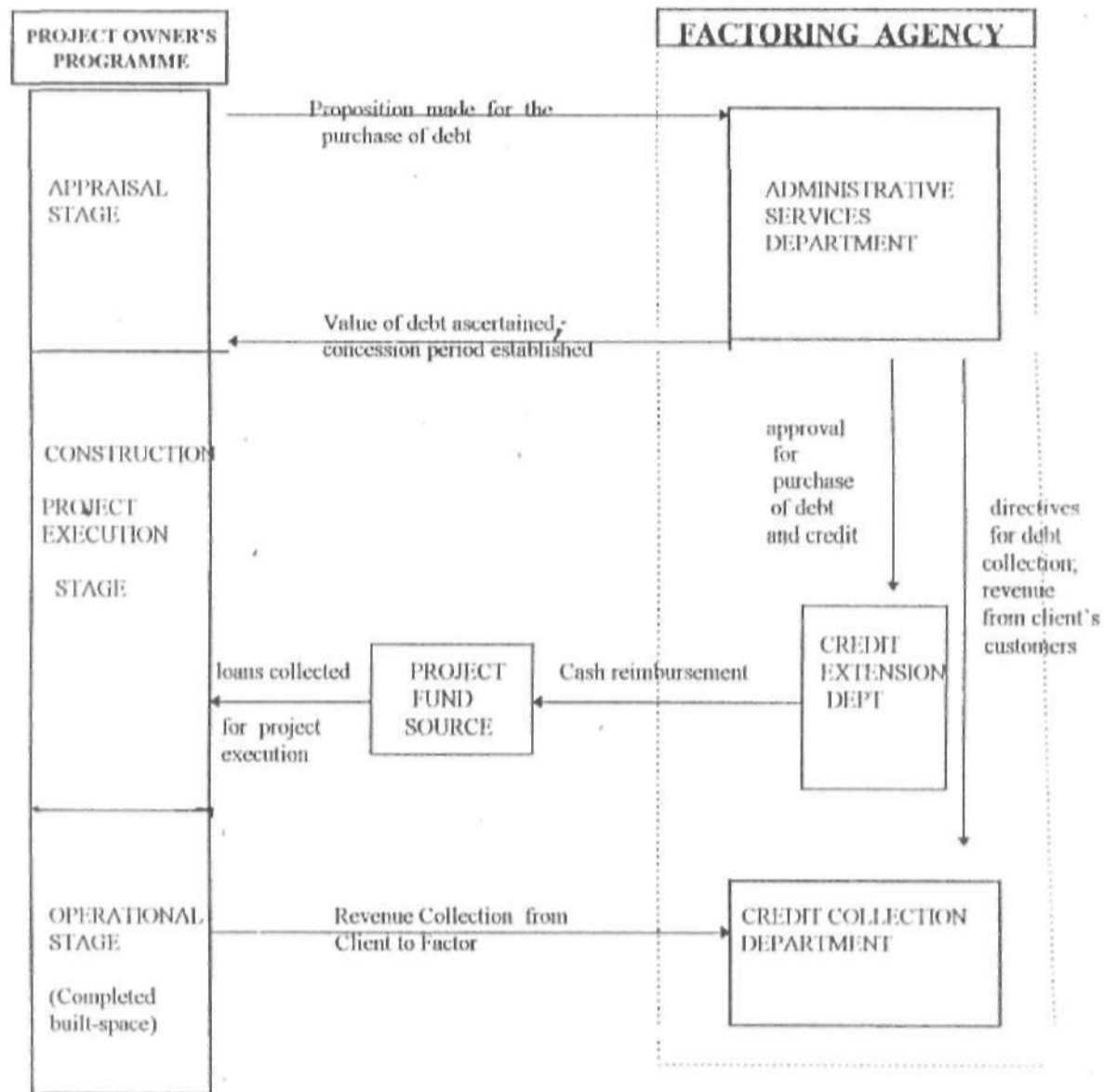


Fig 2.8 Factoring Arrangement For A Construction Project

(Source: Literature, Anonymous, 1993)

From the procedures highlighted above, an arrangement can be prepared for a Public sector unit. This is illustrated in Fig 2.9. The figure identify 2 parties in the arrangement. The vertical arrows are indicating the inter-relationship between the 3 departments of a Factory agency while the horizontal arrows are showing the links (based on the service required by the Project Owner) between the different stages of a Project and the 3 departments.

The scope of Factoring can be extended to construction project funding. The illustration (Fig. 2.9) suggest that factoring can be used at the construction stage of a project.

A number of assumptions were made to be able to achieve the illustrations, viz;

- (a) there is a known budget value
- (b) there is a priced Bill of Quantities
- (c) on periodic basis, there will be fund allocation for the construction works.

The following graphs can be plotted;

- (a) Value - time curve,
- (b) Cost - time curve, and
- (c) Revenue - time curve; based on the above assumptions.

A riser and a step represent a periodic fund allocation, that is, funds made available for works. The dotted curve gives the actual cost when work is done and the continuous curve gives the maximum amount that can be expended (also known as budget limit).

At any point in time; that is at any reporting date, the cash situation or position of the project ( $C_p$ ), can be ascertained by determining the difference between the cumulative contract cost ( $SC_c$ ) and the fund allocation received ( $A_{fr}$ ), these can be read off from the graph; see figure 2.9

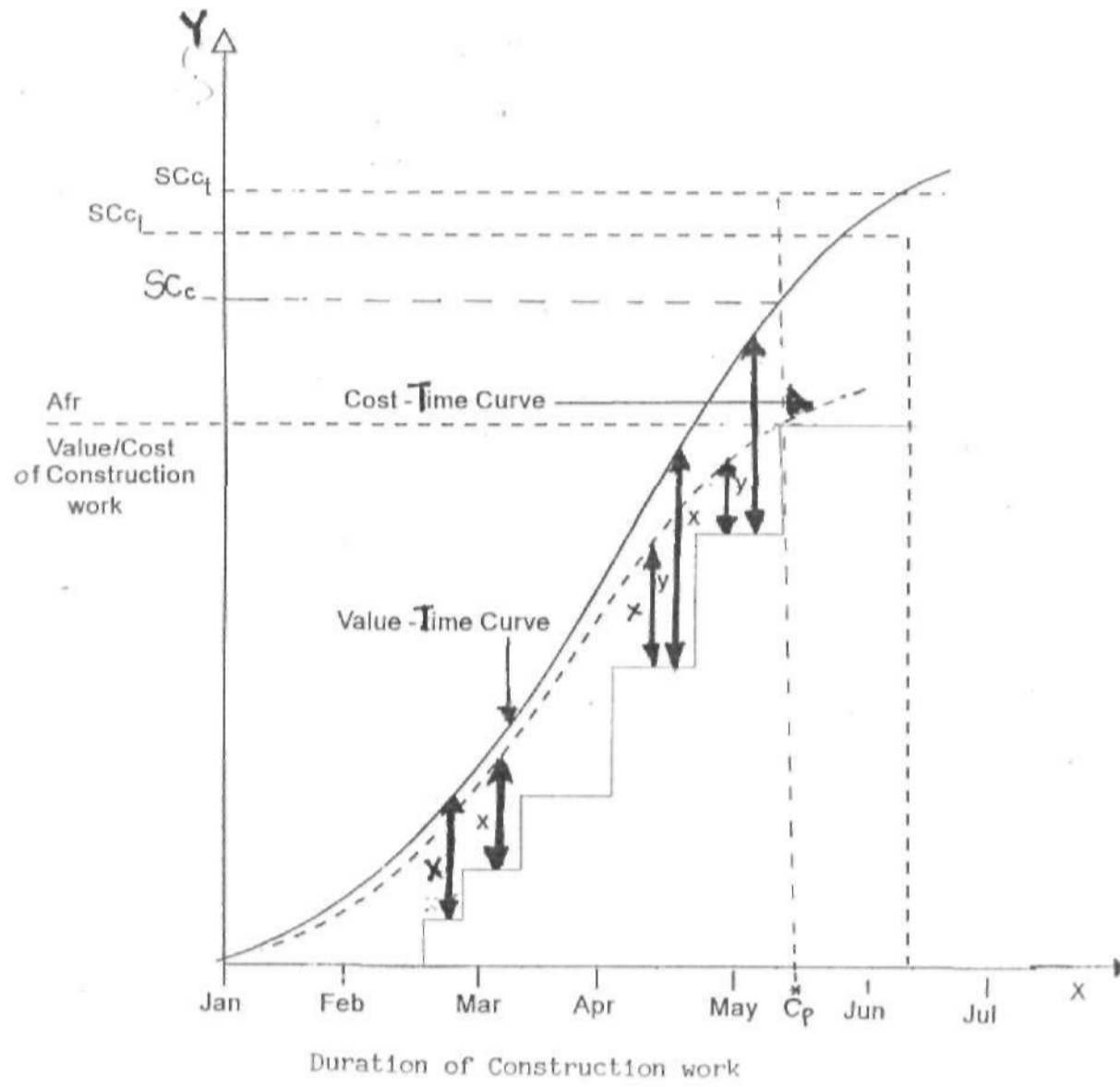





Fig. 2.9 S-Curve Showing Requirement for cash Topping for Typical Public Sector Project (source: Adopted from Cooke and Jepson, pp.45)

LEGEND

	Budget value-Time curve
	Cost-Time curve
	Periodic fund allocation
X	Net Cashflow requirement
Y	Likely maximum Cash requirement

The cash situation (mathematically) of the hypothetical project presented in fig. 2.9 shows that during the month of May,

$$C_p = S_{C_c} - A_{f_r}$$

where

$C_p$  = Cash situation

$S_{C_c}$  = Total amount budgeted to be expended at that date i.e  
May)

$A_{f_r}$  = Total fund allocation received as at May.

Any shortfall in required cash, will mean the need to shore up (or look for) funds to make-up the difference. The Project Owner, may decide at this stage to use Factoring in shoring up the fund requirement for his project. This of course will depend on the Project Owner's capacity to meet the Factor's conditions.

It should be observed that factoring institutions like Commercial finance companies serve mainly the short - and intermediate needs of businesses. Though consider a short-term source of funds, a typical factoring agreement may cover a much longer period that is, when the same factor is engaged to provide several short-term loans for a number of years and when it involves credit and dues (debts) collection functions; a number of years to recover.

#### **2.5.4 Needs and Prospects for Factoring in Nigeria for construction Project Financing**

Public facilities, constitute a substantial proportion of Government investment on physical assets. Through periodic subvention to its agencies or institutions, Government has been assuming for long the overwhelming cost of such built spaces. At present, the proportion of such allocations

meant for physical development, can hardly be enough to match the huge cost of acquisition or construction of the required facilities. Two major reasons can be adduced for this inadequate fund supply.

- (a) fallen value of the Naira (National currency) and
- (b) population explosion (which lead to the need for an increase in the size of such facilities; to sizes more than what the available resources can provide).

For some public institutions, the growth in human population and its activities make the provision of physical structures like building a necessity.

Taking cognizance of the prevailing trend in Government public funding, it will be idealistic to expect the means use hitherto to be realistic at present. A reality of acquiring the required facility (built space) by such public institution is that the huge cost of their construction relative to the institution's revenue (either through subvention or the sale of assets or income from some other investment) makes borrowing, the logical way to finance such projects.

Borrowing for construction projects are largely long-term. The enabling environment for long-term construction project financing in Nigeria is remote at the moment. This assertion is substantiated by Bichi's statement (1997, pp 17) that "the financial services sector in Nigeria has been characterized by relatively high interest rates and shortage of funds to lend on a long-term. As at December 31, 1995, 81% of all financial savings are held by Commercial banks, Merchants banks held 17% while the remainder are held variously by insurance companies, mortgage institutions and other depository institutions".

Looking at the above scenario, it implies that the institutions who by statute are suppose to provide the needed long-term credit facilities

(refer to Fig 2.10 ) are not in the capacity to do so, substantial financial resources can only be committed to short-term loans.

Factoring being a short-term method of financing has expectations for success. Its main disadvantage, is high cost which might be an inducement to Finance agencies, if it is translated to profitability.

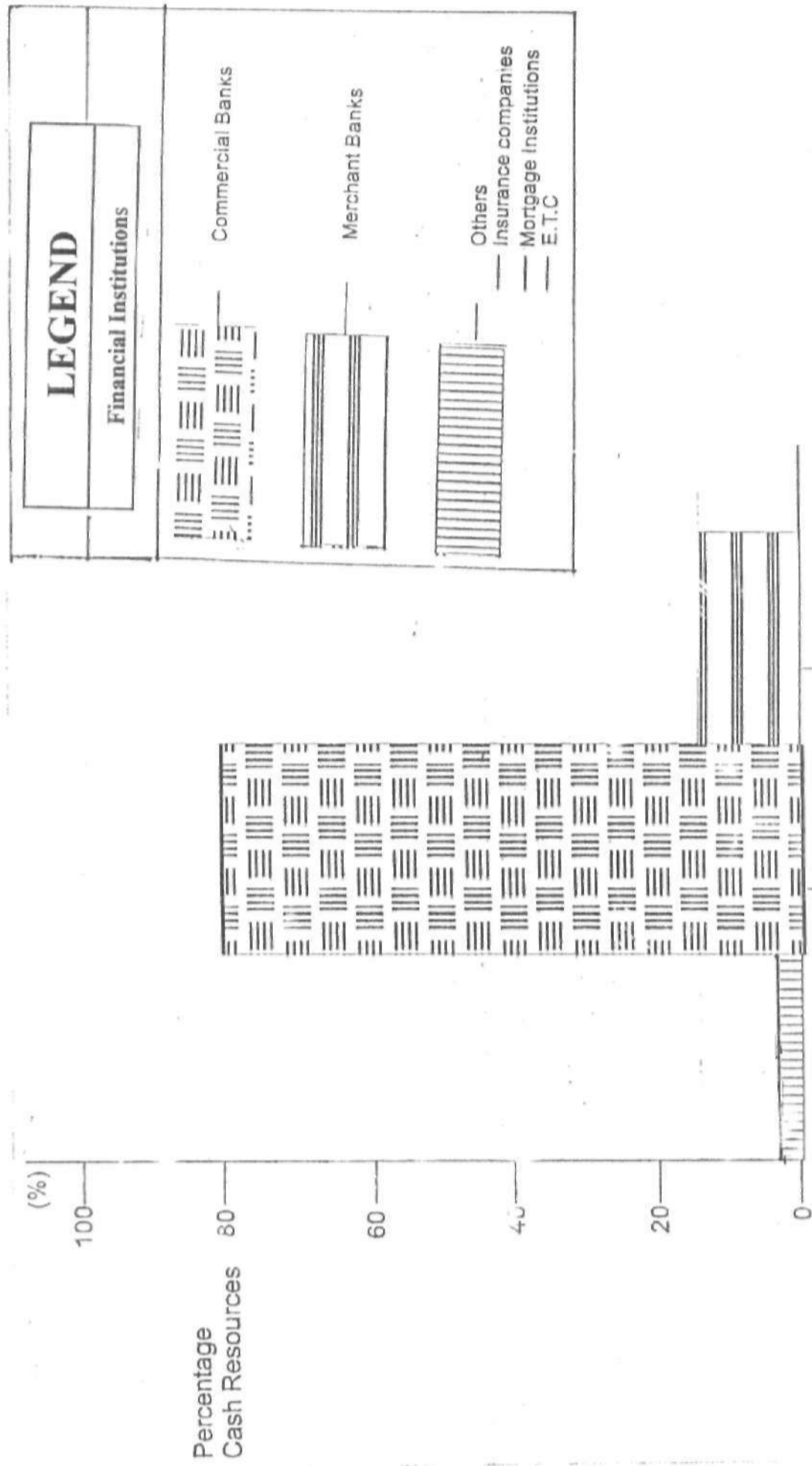


Fig. 2.10 Percentage Cash Resources Held by Different Financial Institutions in Nigeria as at December 31, 1995  
(Source: Bichi Vanguard: Tue., April 29, 1997)

## 2.6 Build - Operate - Transfer (BOT) Method of Project Financing

### 2.6.1 The Concept and Philosophy of Build - Operate - Transfer

Build - Operate - Transfer as the name implies is a means of acquiring public facilities (for example, buildings, roads, dams etc) by temporarily privatising the given project. A project is built and operated by a private developer for an agreed period before transferring such back to the owner; usually the government. The operational stage of the project is regarded as the "Concessionary period," which allows for the Private developers to recoup the monies expended in the construction of the project and its accompanying profit. The concession period could be for between 20 and 55 years, in building projects.

The essence of BOT is to finance projects that are viable but cannot be financed with funds from the National coffers. Although BOT projects are owned by the Government, such are usually entirely Private Sector affairs, in terms of the execution of the scheme.

Price (1995, pp 117) stated that "the arrival of BOT projects stems from Governments wishing to avoid the risks associated with the financing of major construction projects. The BOT method is often selected because it prevents losses and reduces the danger of accumulating long-term debts.

It is important to note that the risks associated with losses and accumulation of long-term debt may not necessarily be the only reason for adopting BOT scheme for a project. Another reason could be escalating cost; the Malaysian Government had to abandon the execution of a project to BOT scheme, when it realised that it could no longer afford to finance the 900km highway project which initially was to be financed by Public

Sector construction.

Most BOT projects are funded on a limited recourse basis, that is, with little or no help from the Government. The costs of construction are met from debts used in financing the project. Such debts are serviced with the cashflow generated by the completed project.

A conspicuous element in all BOT scheme is equity, which encompasses the stakes of the Contractor, the Operator and the Buyer (all regarded as Project sponsor of the end product).

Equity therefore,

- (a) serves as an incentive for the Contractor to complete the project in time and within budget limits,
- (b) proves that the Project sponsors are confident about the economic viability of the project and
- (c) spreads the risk of the project, if it becomes economically unviable at a later date.

In a Eurotunnel project (case sample) where BOT was used, 88 percent of the funding was obtained from equity contribution (see Fig. 2.11) by Banks.

#### 2.6.2 The Practical Procedure of BOT Scheme

The procedure of any BOT scheme can be broadly divided into the following phases, viz; Conception, Appraisal, Mobilisation and Execution.

- (a) Conception - It is the stage in which the idea of the scheme is conceived. It basically entails identifying the project and justifying the need for it.
- (b) Appraisal - The appraisal stage involve the following;
  - estimating the project cost,

- estimating the income and
- determination of the economic viability of the project.

Two other things are also ascertained at this stage; the concession period (earlier defined); and the safeguard. The latter will show whether Government could make up for any short-fall in revenue.

(c) Mobilisation or Implementation - At the mobilisation stage, a Project company is established. This company usually becomes the concession holder. It is its responsibility to arrange a debt package with a Bank, either in the form of syndicated loan or syndicated letter of credit facility. At this stage also, construction Contractors are invited to hold equity in the project. The equity in the project may be sold in the capital market. It is important that an Underwriter is established for both local and international equity investors.

The different sources of funds invariably give a characteristic of BOT schemes. Fig. 2.10 illustrates a financing plan for a BOT project; showing the percentage loan contribution by parties in a BOT scheme (Refer to Appendix D for a breakdown of amount from the different sources). The pricing of these loan advances is illustrated in Figure 2.11.

The Figure 2.12 indicates that the loan (Debt) has a floating rate of interest. The interest rates are fixed at 6 - monthly intervals at a stated margin over the London Interbank Offered Rate (LIBOR); the first \$4 billion was priced at LIBOR + 1.5%, falling to 1.25.

The next \$2.3 billion was priced at LIBOR + 1.75%, falling to 1.5% on completion.

The final \$500 million is currently priced at LIBOR + 2.5%, falling

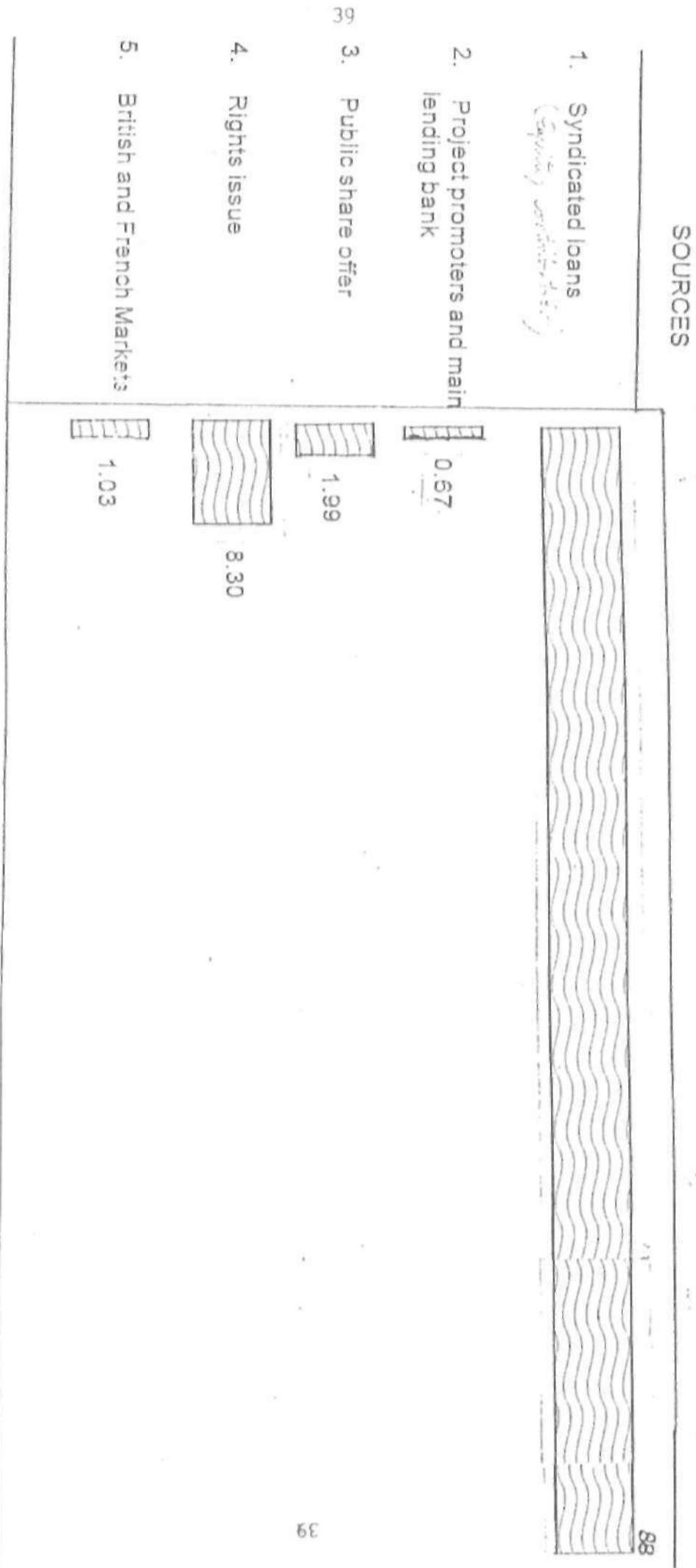


FIG. 2.11 A Practical Illustration of the Eurotunnel Financing Plans showing percentage contributions to the tune of £6.818 billion project value (source: Adopted from, Price, A.D.F pp. 117-120)

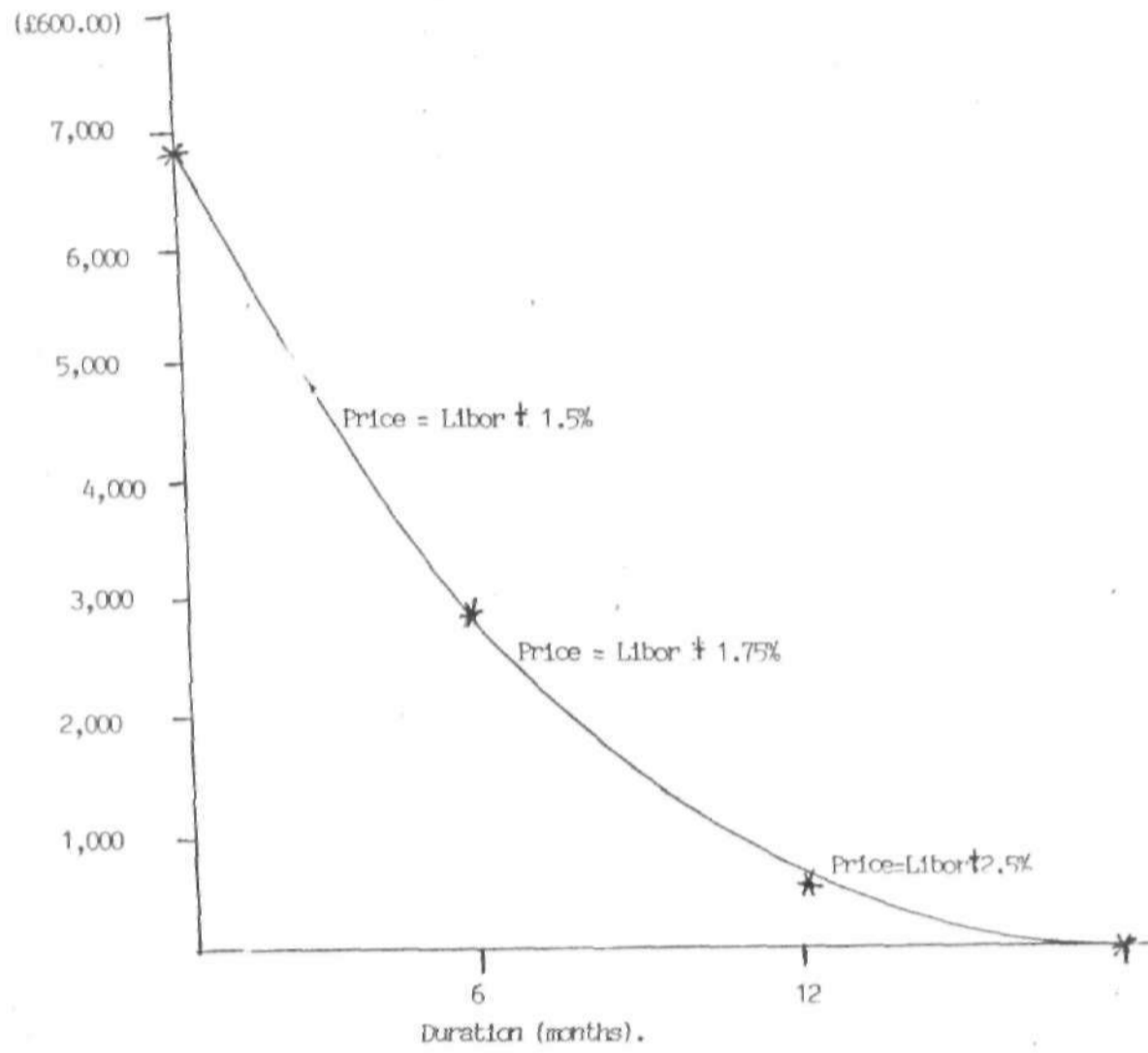


Fig. 2.12 Drawdowns on the Eurotunnel Account showing variable Pricing of Debt. (Source: Adapted from Literature, Price pp. 118 )

to 2.25% on completion.

- d) Execution - This phase encompasses the construction of the required facility (building and its operation, to generate the revenue required for loan repayment.

The four phases are connected in a form of project cycle shown in Fig. 2.13.

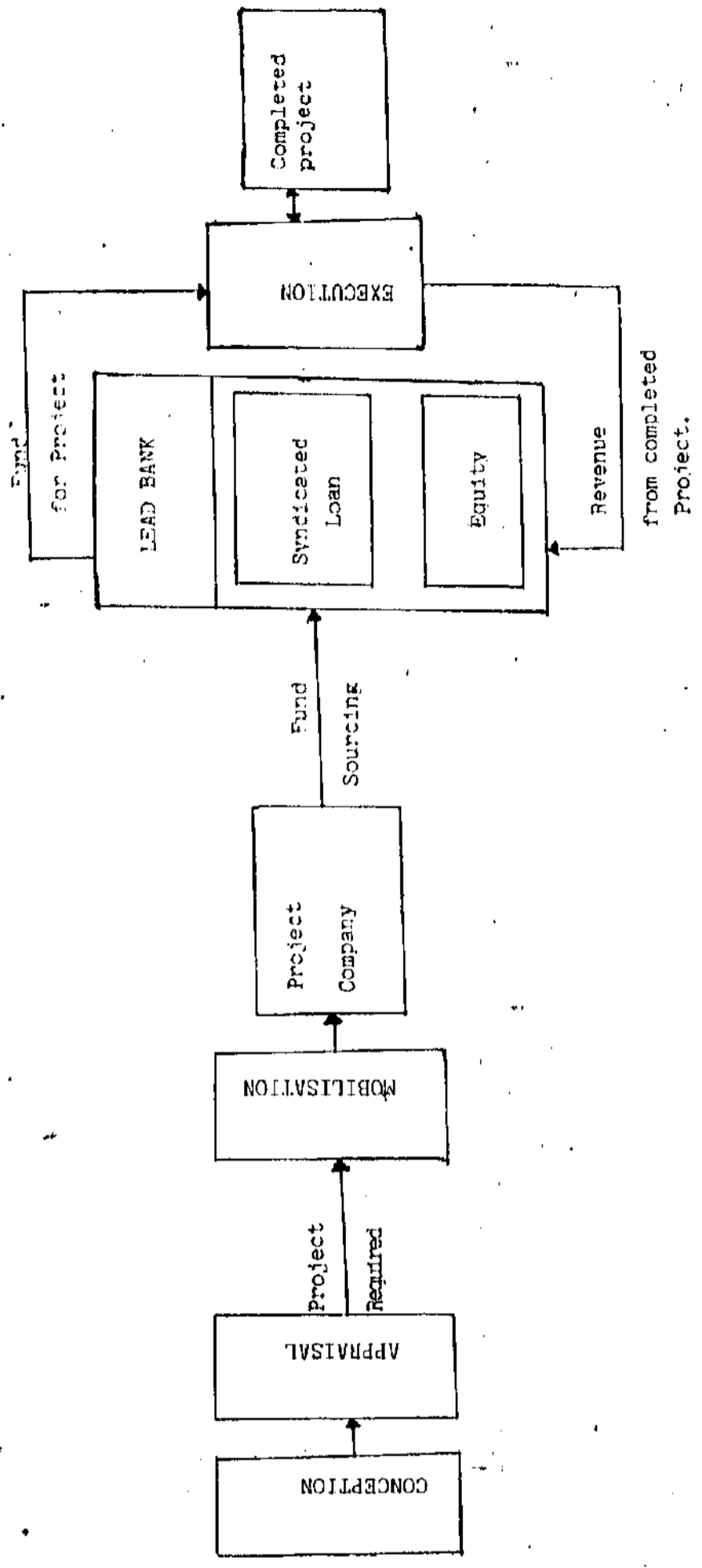


Fig 2.13: BOT PROJECT CYCLE.(ILLUSTRATING PROCEDURE )

Source:(Adopted from literature, Price 1995)

### 2.6.3 Prospects and Limitations for BOT as a Method of Project Financing in Nigeria's Public Sector

The crisis in the financing of education in Nigeria has led to many public institutions like Universities to postpone work<sup>on</sup> new building projects. The current demand for admission far outstrips the available facilities: physical structures inclusive, thus, putting pressure on the Government to expand on the current capacity.

Making Education as right to all, has made the complete privatisation unthinkable; it is viewed as a basic right. Therefore, any means that will aid in improving on the present situation without the Government necessarily losing control or ownership, may be a welcome idea. This implies that schemes like BOT have a chance of being accepted by the Government for some of its Public Sector unit's projects. The BOT facilities have benefits spanning several years, which make BOT desirable because it is based on long-term debts that spread to cushion the burden of loan repayment to a level that can be acceptable by parties involved in the scheme.

The machinery for delivering one of the most important part of the BOT scheme, viz; sourcing and disbursement of funds on long-term basis, is in place. The machinery is the financial industry; whose constituents include merchant banks, development banks, and insurance companies which are statutorily obliged to do so. But prevailing situations (distress in the banking industry) may be an obstacle for these financial agencies to be effective in BOT schemes. As indicated in figure 2.10, a substantial proportion of the cash resources are held by commercial banks who seldom lend on long-term basis. (81% of cash resources are held by the commercial banks and the remaining 19% jointly held by other finance agencies).

In creating a financial package for a BOT scheme, it is essential

to establish the feasibility and viability of the proposed project. Feasibility is dependant on the usability and applicability of BOT scheme on the project, while viability is dependant on profitability, which is the difference between the total project cost,

and the expected revenue (during the concession period). This study is looking at BOT being viable in terms of its ability to succeed in operating based on the requirements of finance agencies.

Establishing a project's costs may be imprecise; if inflationary trend is taken into consideration. Over the years, rate of inflation in Nigeria has been erratic, (refer to Appendix A). Implying that timely execution of a project whose costs have been estimated, is necessary. Otherwise the project cost might escalate to a proportion (relative to revenue) that will make a BOT scheme less realistic.

Considering the importance of generating sufficient revenue to service the debt accrued from the construction of the facility in a BOT scheme, it is important to strike a balance between high user-fee (which might discourage patronage) and low fees (whose cumulative value might not be sufficient to service the debt within the concession period).

BOT schemes requires a project's revenue to be in excess of the running and maintenance costs.

Sometimes drawback provisions are included in the BOT scheme to curtail excessive profits likely to be made by the operating Company.

There are quite a number of projects where the BOT scheme have been used successfully; in Malaysia, Australia and Europe (refer to Appendix E where typical examples of its use are shown. The number and importance

of such projects, are an indication that the BOT financing method are desirable for public projects).

In summary, Figure 2-14 gives a typical BOT scheme that illustrates the relationship between the Project Owner, Developer and Financiers. The flow of funds and responsibility towards the realisation of the project is shown by arrows. It is hoped that the BOT scheme coupled with Factoring schemes could be put together to overcome the shortcomings observed from the study of finance institutions. The underlying information on the two schemes will help shape the intention of this study i.e. the presentation of BOT project, especially when the Project Owner cannot advance the initial capital for construction work.

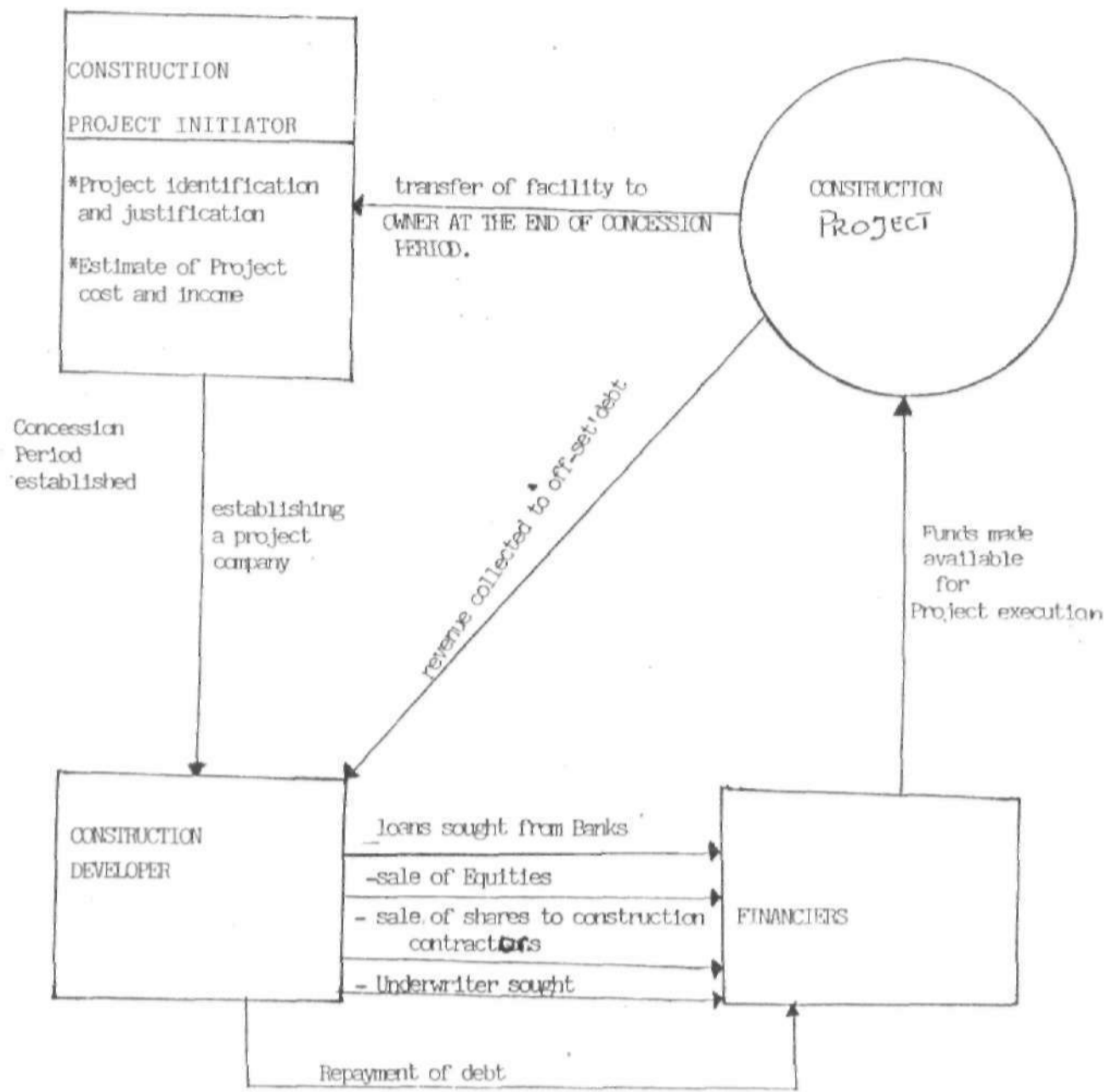


Fig. 2.14 SCHEMATIC PRESENTATION OF A TYPICAL BOT SCHEME TOWARDS WHICH THE DEVELOPMENT OF FINANCIAL MARKET SHOULD GO IN NIGERIA.

### 3.0 PRESENTATION OF RESEARCH DATA

The main thrust of this research work is to prove the usability of BOT-Factoring scheme as a method of construction project financing with emphasis on Public Sector unit's project. Due to insufficient data from a single project, data from two institutions were obtained for the purpose. The Institutions are the University of Jos and the Bantex consortium; the other institution's contractor.

### 3.1 CASE PROJECT ONE

#### 3.1.1 Description

The Project<sup>is</sup> an Academic institution; a university with an Under-developed permanent site. As it has been declared already in the institution's master plan, development has been planned in phases.

The following projects; come under the phase one of the development programme

- (a) the Library Complex,
- (b) parts of the Faculty of Education,
- (c) Faculty of Environmental Sciences, and
- (d) some Communal facilities,
- (e) Infrastructure,
- (f) Staff and Student housing.

The Phase Two largely constitutes academic buildings and other support facilities. These are:

- (a) The Faculties of Arts,
- (b) Social Sciences,
- (c) Natural sciences,

- (d) Law and Management Studies. Others are:
- (e) The Shopping Centre,
- (f) Auditorium
- (g) Guest Accommodation,
- (h) Student's Hostel and
- (i) another set of Senior and Junior Staff Housing.

The following are existing developments, i.e projects that have been completed, viz:

- (a) the Student's Village,
- (b) Senior Staff Quarters, and the
- (c) Naraguta and Abuja Student Hostels.

### 3.1.2 Financial/Financing Characteristics of Facilities in Project One.

According to the Institution's master plan, construction work on site commenced between 1981 and early 1982, when the university was anticipating a budget of about #130 million for a 5-year period. It is further stated that during the third quarter of 1982, it became clear that the expected annual capital allocations were not only to be drastically reduced but were to be limited on a yearly basis, to available allocations.

The phasing programme for projects became a theory. Practicalising the programme has been largely impeded by the absence of dependable budget parameters. Thus, physical projects at the permanent site can be classified into three, viz;

- a) Projects that have not commenced,
- b) The start and stop projects, and
- c) The completed projects.

Only a part of the required accommodation has been provided, these

are;

- a) the Senior staff Housing,
- b) Students Village, and the
- c) Naraguta and Abuja Hostels.

These existing facilities are grossly inadequate.

The start and stop projects are mainly the Faculties; that of Education and Environmental Sciences.

The initial plan of executing projects has been changed, considering the conversion of the Library complex to a Faculty building.

With the exception of academic buildings, most of the other facilities have the potential of financing themselves in the form of finished product financing. In other words, they have the potentials of generating revenue to payback funds invested in acquiring them; which is one of the basic conditions of the BOT-Factoring method proposed.

### 3.1.3 Budget Estimates and Limitations for Project One

For all the projects in the University's Master Plan, Budget estimate were prepared. The budget estimate were prepared based on the National Universities Commission's (NUC) standard guide for universities. The standards are directly related to issues concerning cost.

The basic cost and total cost limits given in the University's Master Plan, are the costs for the fourth quarter of 1983 derived from the 1977 cost limits in Lagos, which were acceptable to the institution.

Certain assumptions were made in preparing the budget estimates, viz:

- a) that the University owns all the land it requires,
- b) that the University requires to build all its academic accommodation

premises,

- c) the University requires to purchase all its furniture requirement.

But the University's Master Plan requires certain observations to be noted. These include;

- a) the University does not need to build all the accommodation since it already has some accommodation which satisfy the needs of identified users.
- b) the University owns considerable furniture,
- c) inflation index should be applied to the basic cost limit; when up-dating the project

Certain deductions can be made from the above statements. These will include, that the University had already made a considerable amount of contribution in the project. Thus reducing its likely contribution if the project is found to be suitable for BOT-Factoring financing.

#### 3.1.4 Cost Data of Project One

The Basic cost limits were taken from the university's Master Plan (1983). These costs were adjusted for 1995, with the rate of inflation determined using inflation indices obtained from the Federal Office of Statistic's publication(1994). A rate of inflation of 441% was used to adjust. The floor areas are termed as nominal floor areas.

Table 3.1 Data of Facilities in Case Project One

S.NO.	Facilities	Floor Area	Basic Cost/M <sup>2</sup>	Project Cost BC. (Floor Area and Basic Cost)
1.	Lecture theatre	2,503	5,672	14,197,016
2.	Shopping Centre	2,875	2,187	6,287,625
3.	Auditorium	2,475	6492	16,067,700
4.	Student's Hostel	52,500	4,375	229,687,500
5.	Senior Staff Housing	108,000	1,772	191,376,000
6.	Junior Staff Housing	64,000	2,260	74,240,000
7.	Cuset Accommodation	3,500	4,167	14,584,500
8.	Faculty building	109,124	2,242	244,639,000

Source: University of Jos Master plan 1983.

### 3.1.5 Revenue Data on Project One

Revenue here is the rent accruable on a given facility. In order to arrive at an appropriate rent to be charged on the use of a facility, a survey was conducted to determine the rents charged on similar facilities by Real Estate Agents around the study area. It is assumed that, it is these rents that will create price competition. An average rent for each facility was determined, and applied for the study.

It is important to note that charges on the facilities, to be provided, needed to conform to market forces. Thus, the study considers the ideals of free market economy. But the rent could be a subject to be decided by the project Owner. The rent value will definitely be a function of the prevailing condition like the concession period and level of demand for use of a facility at a point in time.

One of the conditions of BOT stipulates that a user-fee is to be charged, and should not be too high as to discourage patronage, or too low so that the projected revenue would be enough for credit repayment.

Table 3.2 - Rent on Facilities in Case Project One

S/NO	TYPE OF FACILITY	FLOOR AREA (M <sup>2</sup> )	*RENT PER <sup>2</sup> OF FLOOR AREA (₹)	TOTAL RENT PER ANNUM (₹) net ER
1	Lecture Theatre	2,503	240	600,720
2	Shoping Centre	2,875	1,000	2,875,000
3	Auditorium	2,475	240	594,000
4.	Student's Hostel	52,500	400	21,000,000
5.	Senior Staff Housing	108,000	194	20,952,000
6.	Junior Staff Housing	64,000	126	8,064,000
7.	Guest Accommodation	3,500	1,200	4,200,000
8.	Faculty Buildings	109,124	-	-

\*Rents determined from survey of similar facilities

### 3.2. CASE PROJECT TWO

#### 3.2.1 Description

The Project is a three-floor headquarters building of a Religious organisation. Total floor area is approximately 864m<sup>2</sup>. The initial project duration was 28 months.

#### 3.2.2 Financing Characteristics of Facilities in Project Two

The project was valued at #14.9 million in 1992. Prior to the commencement of work in October of the same year a schedule of 10 - stage payments (refer to Table 3.3) was prepared, based on cash requirements defined by the programme of works vis-a-viz the income projections of the Client. The project is to be financed through contributions by several branches (District councils) of the Organisation. Each branch was levied a certain minimum amount to make up the sum total required.

The target set has not been reached, thus the facility falls in the category of start and stop project mentioned earlier.

Payments are usually made to the Contractor before any work is done on site. Over-time, four of such advance payments were made (refer to Table 3.4).

Table 3.3 Planned Schedule of Payments for Case Project Two

S.No.	Expected Cash period	Planned Cash Release	Cumulative Cash Releases
1	Oct.92	1,256,070.00	1,256,070.00
2	Nov.92	1,080,250.00	2,336,320.00
3	Feb.93	3,307,800.00	5,644,120.00
4	Aug.93	931,250.00	6,575,370.00
5	Mar.94	2,483,830.00	9,059,200.00
6	May.94	579,610.00	9,638,810.00
7	Aug.94	1,193,490.00	10,832,300.00
8	Feb.95	2,430,190.00	13,262,490.00
9	May.95	1,427,420.00	14,689,910.00
10	Aug.95	210,090.00	14,900,000.00

Source: Contractor's Documents/Records (Bantex Consortium, Jos)

Table 3.4 Actual Payment Schedule for Case Project Two

S.No	Period Cash is Release	Actual Value of Cash Release	Cumulative Value of Cash Releases
1	Oct.92	2,336,320.00	2,336,320.00
2	Feb.94	992,340.00	3,328,660.00
3	Apr.94	250,000.00	3,578,660.00
4	May.94	1,500,000.00	5,078,660.00

Source: Contractor's Document/Records (Bantex Consortium, Jos)

## 4.0 ANALYSIS OF CASE PROJECT DATA AND DISCUSSION OF ANALYSIS RESULTS.

## 4.1 Economic Viability Analysis Based on Case Project One Data.

It has been established that BOT as a method of project financing is usually used for projects that are economically viable, in other words, the facility to be constructed should have the potential to generate sufficient revenue to payback within reasonable time (within an agreed concession period) capital expended on it. The payback period here is a function of the project cost and revenue generated by the completed project.

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A number of financial agencies had set a range of time as maturity period which can also be regarded as concession period, for their credit facility (loan or grant).

There are several methods of projects appraising with benefit streams that will last a number of years.

Some of the methods of project evaluation include (i) net present worth (NPW), (ii) Internal rate of return, (iii) benefit - cost ratio (iv) payback period etc.

The outcome of the computations of these methods is about the same whether your are being used for financial or economic analysis.

The first 3 methods are used for projects where the steams of benefits throughout the life of the project are important.

The payback period method is usually used for projects with high risk and the method disregards proceeds after the value of the incremental revenue reaches the total amount of the capital investment.

The payback method is used for this reasearch because the work is more interested in the applicability of the BOT - factoring method whose important request is for any project the method is applied for should have

the ability to pay



the ability to generate sufficient funds to retire debt used in its execution.

Payback periods are estimated for each facility in Project One, so as to ascertain whether they conform with the requirements of potential sponsors (project financiers) for economic viability.

Payback period, is determined using the relationship,

$$Pb = Bc / \text{net } \text{₹R}$$

Where,

Pb = Payback period

Bc = Project cost

net  $\text{₹R}$  = Rent anticipated after cost of credit facility or commission and other administrative charges have been deducted

(Refer to tables 5.1 and 3.2 for Bc and net  $\text{₹R}$  respectively).

#### 4.1.1 Payback Periods for Facilities in Case Project One

##### Lecture Theatre

$$Pb = \frac{14,197,016.00}{600,700.00} = 23.63 = 24 \text{ Years}$$

##### Shopping Centre

$$Pb = \frac{6,287,625.00}{2,875,000.00} = 2.19 = 3 \text{ Years}$$

##### Auditorium

$$Pb = \frac{16,067,700.00}{594,000.00} = 27.05 = 28 \text{ Years}$$

##### Student's Hostel

$$Pb = \frac{225,687,500}{21,000,000.00} = 10.79 = 11 \text{ Years}$$

## Senior Staff Housing

$$\text{Pb} = \frac{191,376,000.00}{20,952,000.00} = 9.13 = 10 \text{ Years.}$$

## For Junior Staff Housing

$$\text{Pb} = \frac{74,240,000.00}{8,064,000.00} = 9.21 = 10 \text{ Years.}$$

## For Guest Accommodation

$$\text{Pb} = \frac{14,584,500.00}{4,200,000.00} = 10 \text{ Years}$$

## For Faculties Buildings

$$\text{Pb} = \frac{244,625,000.00}{0} = 244,635,000.00 \text{ theoretical Years.}$$

#### 4.1.2. Pareto Analysis in Project One

A Pareto Analysis is undertaken on the facilities so as to establish the relationship between the project cost and payback potential. For each of the facilities a Rank is determined in relation to the other facilities. The ranking is done allocating 1 for the least figure (either Pb or Bc) and adding 1 as advantage to the next higher amount. This is done in order to establish an inequality based on the variation of the respective facilities project cost and payback period value.

Figure 4.1 is the Pareto Analysis based on the payback potentials of the facilities. Ranking is in descending order, but of the order of income generation of the facilities.

#### 4.2 Suitability of Public Facilities (Buildings) For BOT-Factoring Financing Based on Case Project Data.

The ultimate goal of BOT-Factoring in Project financing is for a built space (or built spaces) be self financing. When a credit facility is used in acquiring such built space(s), it should be able to generate revenue to be used in paying back the loan.

There are three major ways by which public Sector units in Nigeria can raise funds to repay debts, when the BOT-Factoring method is used to finance construction projects, these are:-

- a. the sale of capital assets (e.g. land),
- b. renting spaces of the completed facility (e.g. Auditorium and Hostel), and
- c. subventions (e.g. budgetary allocations).

1. Student's Hostel									8
2. Junior Staff Housing									7
3. Senior Staff Housing									6
4. Guest Accommodation									5
5. Shopping Centre									4
6. Lecture Theatre									3
7. Auditorium									2
8. Faculty Buildings									1

Fig. 4.4 Pareto Analysis based on Payback Potentials of Case Project One

It is imperative to note that the use to which a facility is put, will determine its ability to payback the monies invested on it. That is why the Faculty building may not be able to payback its debt, because it is largely an administrative block, virtually none of its functions can lead to appropriating rents on it.

Even if the Faculty building has classrooms for renting, issue of convenience might discourage renting out such spaces. Lecture Theatres and Auditoriums in most academic institutions are separated from Administrative blocks.

The payback period for the facilities in project One imply that if loans are to be used finance them, the medium and long-term loans would be the best options. (An exception is, the Faculty buildings which will require permanent debt financing).

From the foregoing, the most sweetable looking at Pareto analysis is the shopping Complex because it has greater payback potential.

#### 4.3 Criteria for Application of BOT-Factoring.





Applicability of BOT-Factoring as a method for financing projects is contingent on answers to the following questions.

- a. What is the financing situation of the project?
- b. If the situation is bad, what caused the situation?
- c. How can the bad situation be addressed, based on prevailing conditions affecting the project?

Case Project Two is hereafter used to illustrate the applicability of BOT-Factoring. The data obtained from Case Project Two, are data of funding from which the financing situation of the project can be ascertained.

The data obtained from case project Two, are data of funding from which the financing situation of the project can be ascertained.

## LEGEND

	Planned Cash Release
	Actual Cash Release
	Cash in Excess of Amount Required
	Cashshort of Amount Required

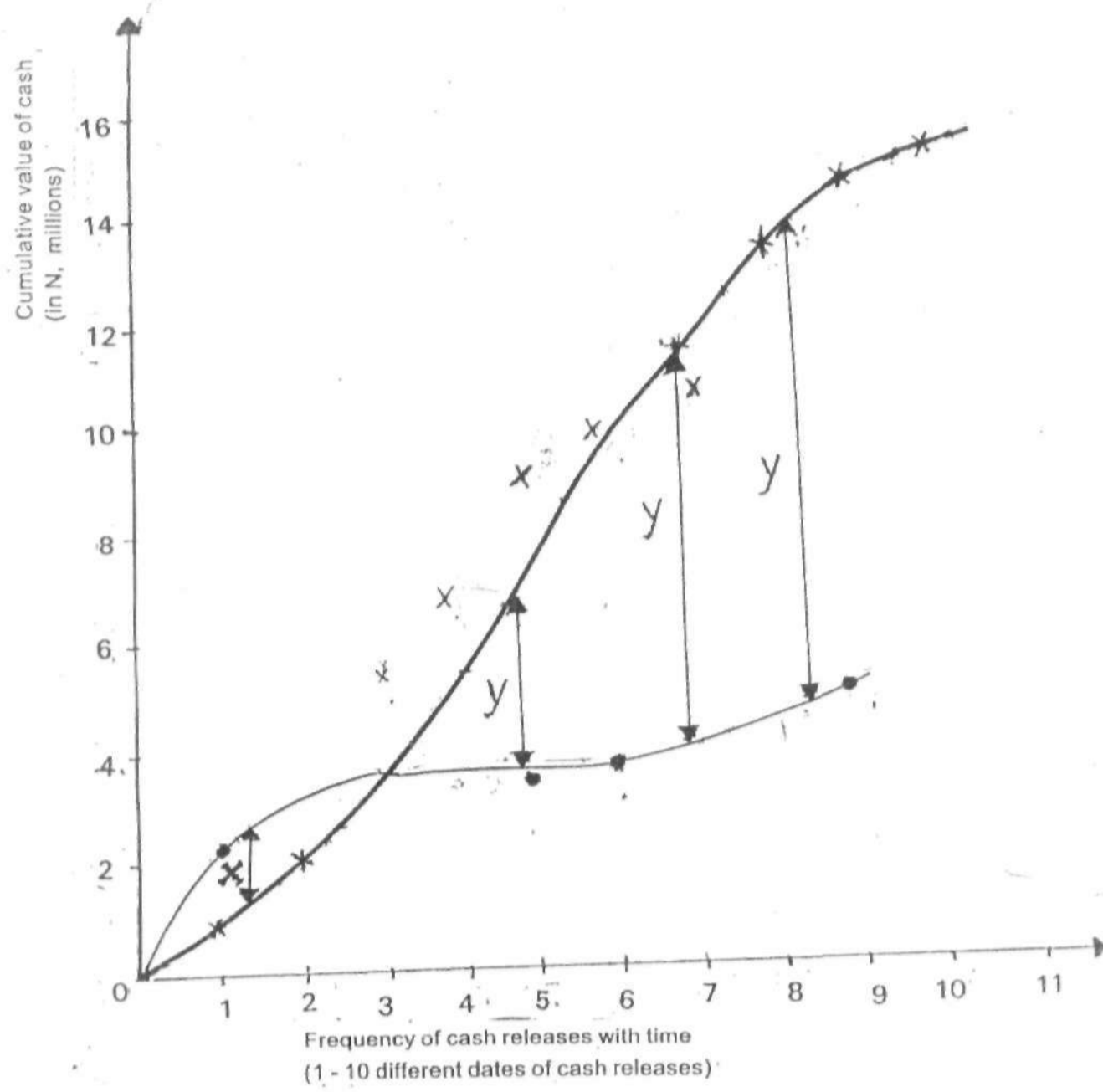


Fig 4.2 S-CURVE PRESENTATION OF CASHFLOW REQUIREMENT

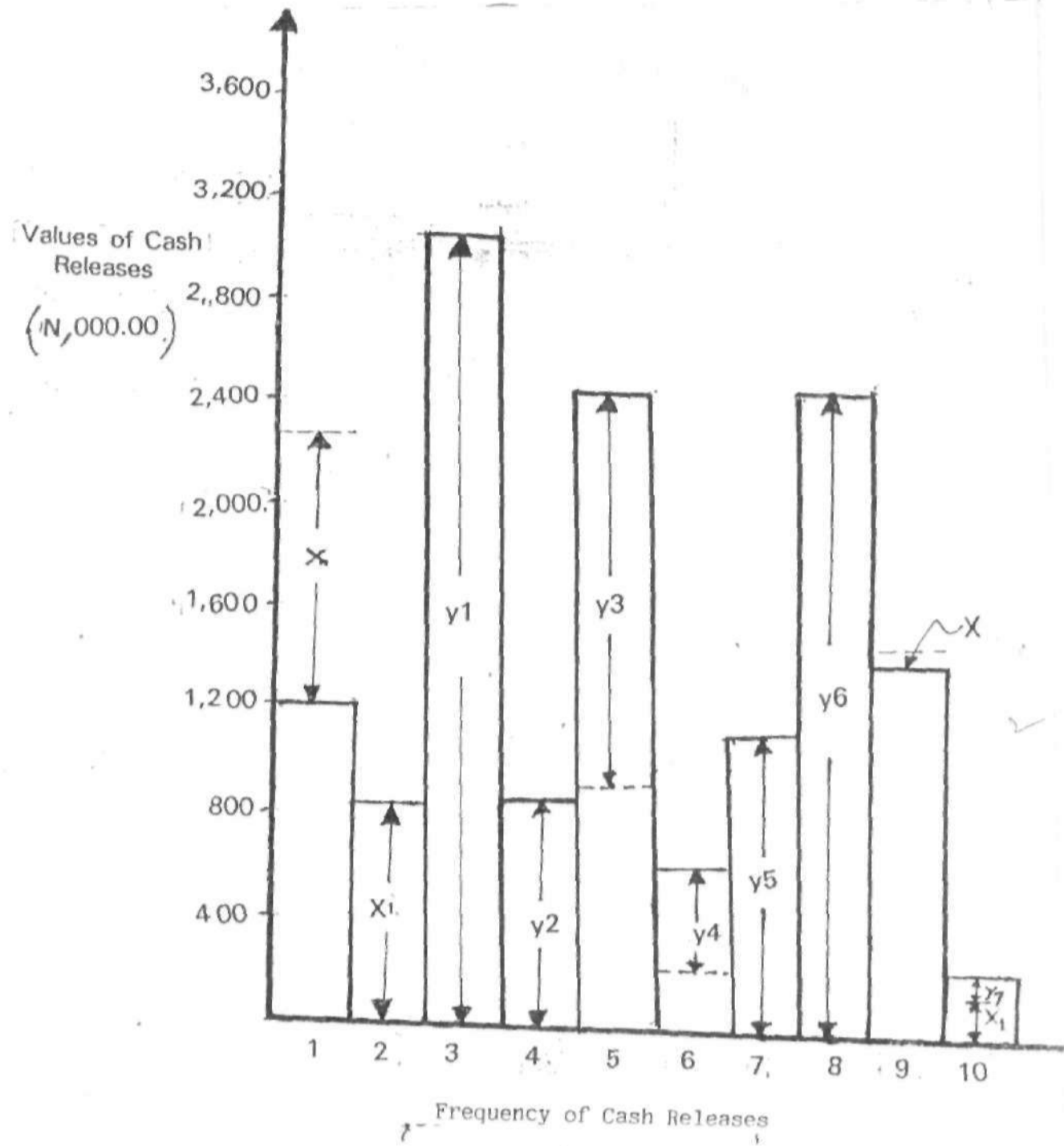


Fig. 4.3 Budget Graph: Value "Vs" time of planned cash release for Project Two, of 28 month duration; October 1992-August, 1995.

**LEGEND**

1.	October	1992
2.	November	1992
3.	February	1993
4.	August	1993
5.	March	1994
6.	May	1994
7.	August	1994
8.	February	1995
9.	May	1995
10.	August	1995
Nos. 1 - 10	Number of times for cash release	
Months	Dates cash is expected or has been released	
-----	Limit of client's cash Released	
X	Amount of cash released by client in Excess of the required that Period	
X1	Excess Release, transferred to Next Needy Period	
Y 1 - 7	Value of Cash shortfall required for different period; Y1, Y2, Y3, Y4, Y5, Y6, Y7	
Note:		
- The data used for the budget graph, are income projections for project funding		
- The project is of 28 months duration; October 1992 - August - 1995.		

#### 4.4 Application of BOT-Factoring Based on Case Project Two Data.

The S-curve of cashflow for Case Project Two (see Fig. 4.2), indicates that at the early stage of construction work, the project had funds in excess of what was planned to be released at that time (i.e. October 1992). This excess offset the non release of cash in November 1992, which was the time the next batch was expected. There from the project experienced drastic reduction and erratic cash releases.

Based on the cash data (given in Table 3.3, 3.4), the financial status of the project shows that only 34 percent of the amount required to complete the project was provided and expended on it. Fig. 4.3, gave Y1,.....,Y7 as the several short falls in time, on the planned financial programme, of the project. Y1, ...., Y6 sum up to N9,821,320.00 in monetary value.

By implication the project could not have been completed with this cash shortfall. Thus, the financial situation of the project is negative, leading to, the Project experiencing time over-run.

The financial situation of the project is due to inconsistency on the part of the Project Owner to meet the cash obligation. This can further be attributed to non availability of cash, when such cash is required or insufficient amount at the disposal of the Project Owner to meet such obligation.

Insufficiency or non availability of funds can be addressed through borrowing. For borrowing to be effected, the borrower ought to know where and how to borrow.

However, the financial records of Project Two showed that out of the N14.9 million required for the project, only N5.08 million was released as at May 95; When the cumulative value of the cash released should have been N14.9 million.

Assuming Project Two is to be a facility with revenue prospects, it could do with some support of BOT-Factoring financing to make up the 66 percent cash shortfall for that period.

The scheme should be: establishing a project company which will arrange a N14.9 million debt package before the commencement of the project. Figure 4.4 indicates Y<sup>1</sup> to Y<sup>7</sup> as points of cash needs, implying that there would have been 7 draw downs from the debt account as follows:

Table 4.1 CASH DRAW DOWN FOR BOT - FACTORING FINANCED CASE PROJECT TWO

DATE	VALUE OF DRAWDOWN (N)	INTERVAL BETWEEN DRAWDOWNS	REFERENCE
Feb 93	3,307,800.00		Y <sup>1</sup>
Aug 93	931,250.00	6 months	Y <sup>2</sup>
Mar 94	1,491,490.00 i.e.(2,483,830-992,320)	6 months	Y <sup>3</sup>
May 94	329,610.00 i.e.(579,610.00-250,000.00)	1 months	Y <sup>4</sup>
Aug 94	1,193,490.00	3 months	Y <sup>5</sup>
Feb 95	2,430,190.00	6 months	Y <sup>6</sup>
Aug 95	137,510.00 i.e (210,090-72,580)	6 months	Y <sup>7</sup>

\*N72,500.00 is X<sub>1</sub>, value of excess allocation for May 95.

#### 4.5 Limiting Conditions for BOT-factoring Application

Consequent upon the prevailing economic situation in the country, very few sources are available for borrowing large sums of money for capital

intensive projects. It has been established earlier that as at December 31st, 1995, 81 percent of all financial savings are held by Commercial Banks. This means that most of the loans that would be obtainable are short-term. Thus, a substantial part of money required for such capital projects may come as short-term loans.

Considering the 6 months interval between certain drawdowns for case project two, the Project Owner can negotiate for variable interest rates, in other words, each drawdown should have its own interest charge starting at the time such draw was made. The project being considered will rely on instalmental payments of debts, over a relatively longer period of time: a large debt may not be redeemed within the maturity period for short-term loans, as would be required by the commercial Banks. BOT-Factoring financing method, highlighted earlier that a guarantor can be obtained to pay up any backlog of debt by the maturity date. Such a guarantor by virtue of the services it renders, is ready to bear the risk of slow payment. The remainder of the instalmental payments by the project will go to the guarantor.

The operation of International Development Agency, (IDA, a World Bank subsidiary), makes it a favourable guarantor. The 0.75 percent charges on its credit facility, makes it more attractive than any other source that will charge interest on its loan. Thus, capital intensive projects can involve institutions like IDA.

It is not uncommon in Nigeria for funds to be diverted for purposes or to destinations they were otherwise meant for. The Project Company in a BOT-factoring arrangement will reduce this risk of diversion of the funds for construction works and diversion of the proceeds for debt repayment. The operation of the Project Company however, depends on its constitution.

Having a company that represent and reflect the interest of parties involved in the scheme will to a large extent reduce (or even) eliminate Government bureaucratic interference, that may lead to such diversion.

Information from relevant literatures and data from existing projects have been used so far to establish a general concepts of the BOT-Factoring scheme. Attempts is hereafter made to present a clearer picture of the concept in a model.

#### 4.6 The Proposed Research Model

Information obtained from Case Project Two, indicates that the Project Owner had planned to make provisions for the project periodically. But by the time the construction work was on stream, there were breaks in cash flow from the Project Owner's source.

If BOT-Factoring scheme is to be adopted, the cumulative shortfalls and allocation (cashflow) breaks will constitute the debt a project owes on completion of construction works; because such breaks are to be linked by loans from short-term lenders. Since loans from most finance institutions in Nigeria are on short-term basis, the resultant debt would have to be settled within a short time. This debt, is what the Project Company in the BOT-Factoring scheme (refer to Fig. 4.4) sells to the Factor that will accept the terms of concession (that is revenue yield) from a completed facility .

The revenue from user-free or user-tax and income from other sources say the sale of an asset will be used to pay back the debt. The budgetary allocation from the Government may only serve as a safeguard (SG) in any event of revenue shortfall.

Figure 4.4 illustrates the concept above (which has been further simplified by an ideogramme; fig. 4.5). The decision to engage the Factor will actually be taken at the preparatory stage, where the Factor guarantees payment of debt on completion of the whole construction works.

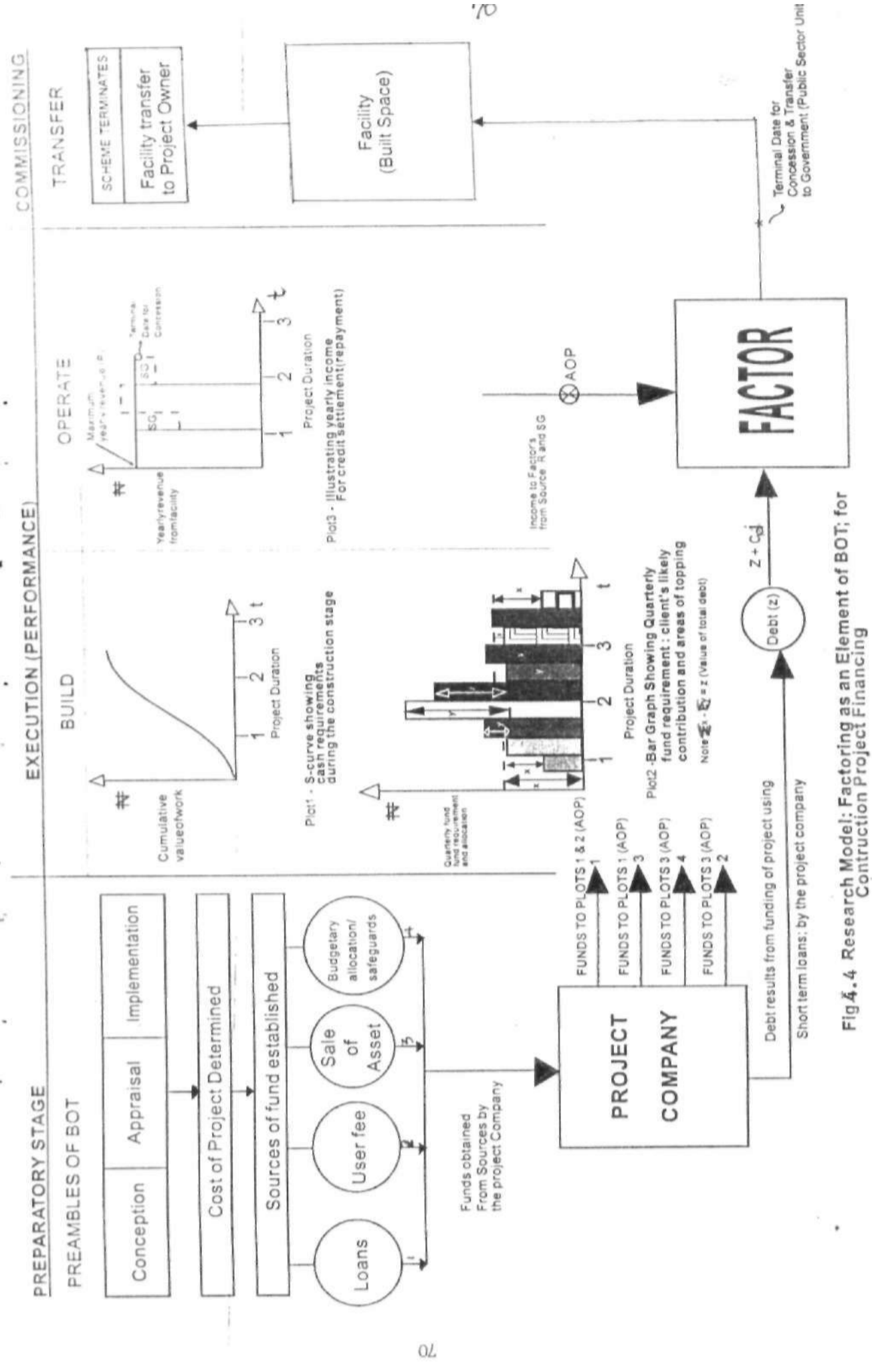




Fig 4.4 Research Model: Factoring as an Element of BOT; for Construction Project Financing

LEGEND	
Z	Value of debt; lenders contribution in excess of client's of contribution
AOP	Area of application of fund (AOP)
x 	Value of quarterly allocation from client in excess of fund required.
y 	Amount of fund topped by short-term lenders when require.
R	Revenue (user-free or tax)
SG	Safeguards, likely periods when client ought to make-up for revenue shortfall.
$AOP \cdot \phi$	Revenue for safeguard, remitted to Factor
-----	likely limit of Government allocation
$Z + C_d$	Project's budget limit, that maximum amount required in a quarter. Cost of debt (i.e. Principal amount plus interest); amount requested from Factor. It is equal to value of amount sold to the Factor (to pay short-term loans).

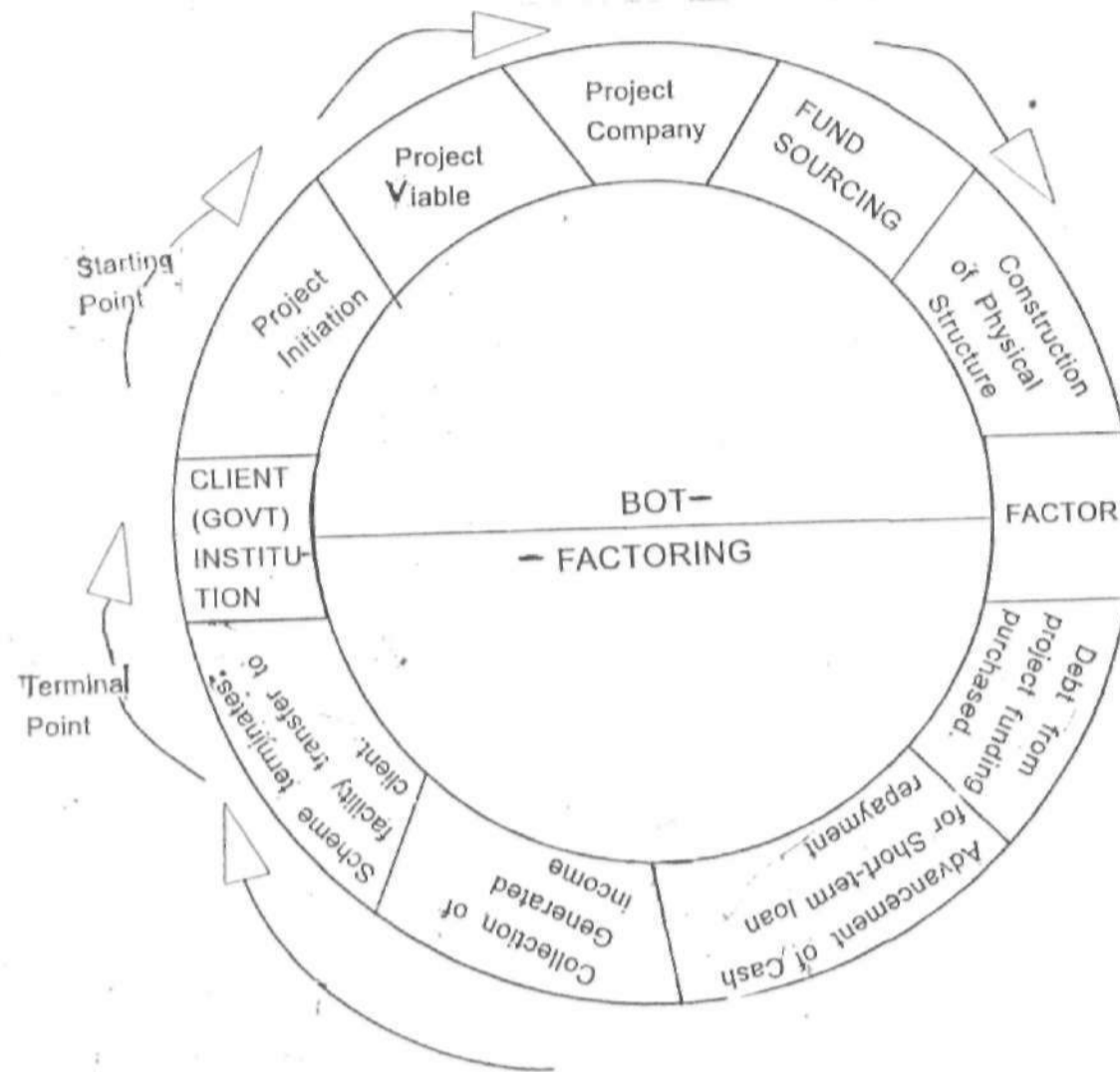


Fig. 4.7 . BOT - FACTORING PROJECT CYCLE IDEOGRAMME

Sources; Developed based on Literature: 1. Price, 1995 p 117 - 120

2. Arunachalam, 1993 p 1077 - 1078

Note that the Project company is merely a channel for factoring service. The Factor is therefore on a service to the Project company. Their relationship will be an object of detailed agreement; negotiated thoroughly.

#### 4.6.1 Proposal for the Adoption of BOT-Factoring with Respect to Finance Institutions in Nigeria.

The extension of credit facilities to Public institutions, of recent, has become a necessity for the successful execution of capital projects. Already finance institutions, have the problem of maturity transformation on the bulk of their deposit liabilities to grapple with. Credit collection used to be a problem, especially when most organisations or individuals try to delay payment for as long as possible. This tied-up the lenders capital in their trade and for the sole benefit of the debtors.

In Nigeria today, there is not only the risk of delayed payment but also the risk of non-payment at all, either as a result of the lender going bankrupt or insolvent, or as a result of fraudulent acts. It is for this reason that a Factor is brought in to guarantee the timely payment of debt to such lending agencies.

The scenario of financial services sector in Nigeria does not present such a Factor. A preliminary survey conducted for this research work tells that most finance agencies who by statute are expected to offer factoring services in Nigeria, desire a fast rate of return on their investments, which construction project seldom offer. The characteristic of investments in physical structures (e.g Buildings), is that their rate of return is usually low and slow to accommodate the interest rates of 18.5 to 21 percent charged by the finance institutions, to make the factoring of projects

economical.

Merchant banks and Mortgage banks agencies prefer co-lending or Equity participation to Sole sponsorship of a project.

Institutions like the African Development Bank (ADB) and the International Development Agency (IDA) are prospective Factor Institutions because of the no interest charge on IDA's credit facilities for instance it can be concluded that IDA would be able to bear the risk of slow payment.

## 5.0 CONCLUSION AND RECOMMENDATIONS/SUGGESTIONS FOR FURTHER RESEARCH.

## 5.1 Conclusions

Public Sector Units in Nigeria execute Construction Projects largely through funds from Budgetary allocations. Most of these projects are bedevilled by unsteady fund supply.

Records of two projects studied reveals that programmes of planned cash requirements (to be released) for the projects are unrealistic; due to reduction in the budgeted amount and inconsistent allocation of funds to the projects.

Related literatures (see Price, A.D.F., 1995, pp. 117-128) showed that BOT has been a well-tried <sup>Method</sup> of project financing by Government in countries with stable economy; though capital used are long-term loans.

However, research findings from literature and structured questionnaires/ personal interview, administered to professionals in the financial industry in Nigeria reveals that:

- (a) A substantial proportion of financial saving (cash resources) are held by Commercial Banks ~~see Table 4.1~~.
- (b) Lenders/investors in Nigeria are more disposed to ventures that will give quick returns (see Bichi, K. 1995, pp.17).
- (c) There is the risk of non-repayment of loans, if such are used in executing projects. These could be due to either non availability of funds at the time the funds are required or diversion of the funds to other competing

sectors of the client's activities.

Further research showed that there are certain benefits of factoring that could be used in solving problems highlighted earlier in a, b and c.

These benefits are:

- (a) Cash advancement (extension of credit facility). In other words, a client can obtain from a Factor, cash equivalent to the value of debt to be sold to the Factor.
- (b) Collection of debts by the Factor on behalf of the Client; from the client's customers.

The foregoing, are the basic premise of modifying BOT; to be used as a means to finance construction projects for Public Sector Units. The modification process resulted in a model, the BOT-Factoring scheme.

The basic tasks involved in a BOT-Factoring scheme are:

- a) Granting of Credit facility.
- b) Construction of physical structure.
- c) Purchase of result<sup>ant</sup> debt on the use of short-term loans for construction works.
- d) Operation of the completed structure and
- e) Collecting generated revenue to payback credit used for construction.

Concluding the study therefore, the proposal for the adoption of the BOT-Factoring method for the purpose of construction funding in the Public sector, seems feasible and viable.

The concept introduced i.e BOT-Factoring seems useful also, in the Private Sector. However, there may be a need for introduction of some

modalities (outside the scope of this study). Thus, the model presented in Fig. 4.4, apart from giving a clearer picture of the concept, can also be a frame work for possible variation to suit other peculiar situations.

The research which was able to identify the suitability of certain Public projects (the result of the case study) confirms its applicability in Nigeria.

The setting up of a financial market necessary for the effective use of the BOT-Factoring financing method is an open question.

#### 5.2 Recommendations/Suggestions for further Research.

The common characteristics of cash provision for construction projects in the Public sector, that is reduction in the budgeted amount and erratic releases, had led to most of the projects either completed behind their scheduled dates or not completed at all. It is necessary that the practice be stopped; money spent on a construction that is not put to use (due to non completion), are money lost for the Nation. One of the methods of improvement may be BOT-Factoring, if the financial institutions' environment would be developed as needed.

Based on the peculiarities of the financial environment in Nigeria, the following conditions should be observed in a BOT-Factoring scheme:

- a) The project should be established to be economically viable.
- b) There should be a Guarantor to purchase the debts of the Project Company.
- c) The revenue to be generated by debt financed facility, should be enough to pay back the total debt and also cover the Factor's commission within its maturity or concession period.

- d) To avoid the diversion of revenue from completed project, the project company should be independent of the total influence of the Project Owner.

There are prospects for obtaining Factors (Factoring Institution) within the country. The Petroleum (Special) Trust Fund (PTF) readily comes to mind as a prospective Factoring Institution in Nigeria. The PTF pooled large financial resources for capital intensive projects, for instance, through a loan package to the Kaduna Chamber of Commerce and Industries, the PTF funded wholly the construction of the New Kaduna International Trade Fair complex. This is an indication of the potentials of the PTF as a Factor.

There is also the possibility of the resultant debt (due to loans for construction works) to be packaged in the form of securities having different maturity dates; it should be considered along the line of development and trustship of securities market in Nigeria. This is for the purpose of raising capital for debt repayment. These securities can be sold to individual investors in the security market. The fineness/applicability of this could be subject of further research.

Further studies should look at the viability of such a scheme considering the imperative of sensitivity of the payback period to interest charges on the loans for execution of the construction projects.

## APPENDIX A

## ALTERNATIVE SOURCES OF FINANCE FOR CAPITAL SCHEMES

(Elliot 1982, pp.35-36)

## CASE I: The Morgan Grenfell's Covenant Scheme

This is a method developed over 24 years ago. It has undergone various transformation over the years. Basically, it is a method where a public authority gives either the Bankers or a Finance Company a licence to enter its land for the purpose of development.

The successful Bank or Company then enter into a building contract and are liable for meeting all the contractual payments necessary for the construction works.

The Public authority still retains the ownership of the property and act as the agent for all purpose of the building contract. But it (authority) agrees to pay the aggregate amount expended by the company in carrying out the construction of the property. In addition, the authority also pays expenses incurred (including any debt interest) over an agreed period of time. The Bank or Company enjoys no interest in the land and its protection rests entirely in the good name and creditworthiness of Public Authority.

The covenant scheme is also referred to as effective deferred purchase, clearly got round the old system of borrowing controls since it does not constitute direct borrowing by the client, because such borrowing was done by another party on behalf of the client.

## CASE II: The Brighton Scheme

Brighton development company in 1973, adopt a variation to the Covenant

scheme in constructing the Brighton Civic Centre.

Here the Local authority (Council) could at anytime notify a Company requiring it to take over the council's obligation under the building contract to make payments in respect of any future Architect's certificates.

From a consortium of Banks, an assigned development company secures a loan to meet the obligations. Securing this loan is based on the strength of the council's covenant to reimburse the company specified sums over a period of 30 years which were total to the company's total capital commitment. The council's covenant is then assigned to the bank by the company.

Other sources of finance adduced by Elliot are:

- Special allocation
- Limited liability.

#### **Special Allocation**

This approach was adopted for the Thames flood barrier. It is a method that best suits a situation where <sup>there</sup> are limitations on how much an Authority can spend on a given project. If there exist a proposal that requires commitments in excess of the available funds, the authority could seek Ministerial approval or Presidential approval as the case may be; for the scheme and a separate capital allocation, on the grounds that the project is of national importance. A typical allocation, that is special, enables an Authority to borrow and spend up to the limit of the allocation.

#### **Limited Liability**

This means of financing was developed by Elliot for situations where there is the need to carry out certain activities likely to be negated by a kind of central control on expenditure. He stated that limited liability companies can be formed to be either used as a vehicle company in a deferred

purchase scheme or to undertake specific development projects, and also foster industrial development. Furthermore, local authority can make revenue grants which may count against expenditure controls; to acquire properties and/or plant and equipments. The company can also generate its own fund or raise money from other Private Sector sources such as pension funds and generally has more scope within which to operate than the local authority.

#### **Lease/Lease-Back Arrangement**

This form of achieving development got mentioned by Elliot. It is an arrangement where an Authority could lease out its site to a Finance company, the Finance company funds the development in most instances on the basis of stage payment, the Authority is responsible for supervising the execution of the works and certifying it.

On completion, the Authority takes a lease - back of the completed development and then sub-lets the development in order to generate the notional capital to offset the notional charge.

It is important to note that the Authority charges a notional fee equivalent to the freehold value of the land when leasing back the completed development, it also pays the Finance company a notional fee equivalent to the freehold value of the developed site.

## APPENDIX B

## MODELS OF PROJECT FINANCING

S.No	MODEL	FEATURES
1.	Pure Project Financing (Off-Balance sheet financing)	Project Cashflow is used; * As loan's security * To pay loan's capital and interest. * To pay other expenses.
2.	Normal Balance Sheet Financing	* total financial structure of borrower should be sufficient to pay loan capital and interest * Borrower's balance sheet asset acts as lender's security
3.	Syndicated Commercial Bank Financing	* finances for a project are pooled from consortium of commercial banks. * there is spread of risk and cost associated with the loans, over different sponsors.

Source: Price, A.D.F (1995, pp.46-48).

Although, the Managing director; Collin Miller was not so sure if he can entirely attribute Lundby's turnover growth and market success to Factoring, but he believes that Factoring has provided them with the facility to buy the quantity of raw materials needed to increase production and sales which are indicators to such growth and successes.

Lastly, Miller stated that contrary to a lot of people's view that companies adapt Factoring because they are in trouble, which he held is wrong, "companies factor because they are Smart."

APPENDIX DTable D. The Eurotunnel Financing Plan

SOURCES	EQUITY		LOANS		TOTAL
	Ordinary Share	Preference Share	Long-term	Short-term	
Syndicated Loan					
Project Promoters and main Lending Bank			6,000		6,000
Public Share Offer	46				46
Rights issue	566	136			136
British and French Market			70		70
					6,888

APPENDIX ENOTABLE BOT SCHEMES

PROJECT	COUNTRY	VALUE
* Eurotunnel	France/United Kingdom	Over £6 billion
* North-South Highway	Malaysia	Over Us \$ 2 billion
* Sydney Harbour Tunnel	Australia	A \$ 2 billion

APPENDIX FA RELEVANT FINANCIAL INSTITUTIONS FOR MEDIUM  
AND LONG TERM CREDIT FACILITIES

## Merchant Banks

These are regarded as wholesale bankers because they cater for the needs of corporate and institutional customers. The part they play in the economy is providing medium to long-term finance by engaging in activities such as Equipment leasing, loan syndication and debt factoring, and project financing.

## The Nigerian Bank of Commerce and Industries (NBCI)

NBCI was established with the sole aim of granting loans to small and medium scale enterprises, the bank also engages in Share underwriting, Project identification and Feasibility Studies.

Occasionally, the bank's investments spread to big projects in which it is a Co-investor with other institutions. It participates in financing projects in either of three ways, viz, Equity participation, granting of loans, and a combination of equity and loans.

## The Federal Mortgage Bank of Nigeria (FMBN)

The basic functions of the FMBN include the provision of banking and advisory services, mortgage financing, and research activities to do with housing.

## Urban Development Bank (UDB)

The Bank was established to provide for improvement of the inadequate.

social facilities and dwellings, mass transportation and public utilities. The Bank operates as an independent profit-making institution. It provides financial resources to both Public and Private Sectors of the economy in order to achieve the goals for setting up the bank.

#### **Finance Companies**

They are not deposit-taking institutions. Their major sources of funds include loans, other liabilities and share deposits. They comprise a heterogeneous group of financial institutions. Most emphasise on the provision of business credit, Factoring and leasing activities.

#### **Insurance Companies**

They consist of Life and Non-life as well as those which engage in both activities. They mobilise relatively long-term funds. They invest in Government stock. They are one of the major holders of Government development stock.

#### **Building Societies**

These are institutions established with the concept of pooling financial resources through regular contribution by subscription. The societies use the personal savings of mutual contributors to lend to individuals buying houses. An important characteristic of Building societies is, they borrow short and lend long. The long-term loans are secured by what is termed opportunity asset which has a low risk of loss.

#### **Pension Fund**

These are financial institutions, that save contributions of potential Pensioners and/or employers on behalf of their employees to meet future financial obligation (pension) in favour of the Pensioners. The funds, also termed as liabilities, are relatively stable and long-term. And thus

are used by Financial institutions to purchase assets that have a relatively long-term income and capital gains potential.

Note, only a part is used for such purchase.

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