A THEORETICAL ANALYSIS OF INTEREST COMPONENT IN A LOAN

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Abstract

In most loan agreements, the borrower plays a passive role. It is the lender who determines the rate of interest as well as the method of interest repayment and imposes them on the borrower. Therefore it is important that the borrower has a fair knowledge of the interest component in a loan. It is upon this premise that this paper examined the determinants of interest on loan, methods of determining interest rate, and interest repayment method. This involves a critical review of extant literature where it was revealed that lenders consider the nature of a loan, cost of funding the loan, government regulations, economic condition, competitive parity, and credit rating of the borrower before charging interest on loan. In determining the rate of interest on loan, the available methods to the lender are cost-plus pricing, price-leadership, and risk-based pricing, but the price-leadership method appears to be more popular. In the repayment of interest on loan, it is observed that different methods such as concurrent, upfront and backdend interest repayment are used. However, our review indicates that most lenders are more disposed to the upfront interest repayment. Based on the above, it was recommended that lenders amount of loan involved is high; concurrent interest repayment should be entertained while upfront interest payment should be discouraged; and the price-leadership method of determining the rate of interest on loan should be adopted by lender.
Keywords: Interest, lenders, borrowers, loan

Introduction

A loan is a product offered for sale by a bank**,** credit union, or any other lender. It is an agreement between a borrower and a lender in which the borrower receives an amount of money which he is obligated to pay bade. In other words, a loan is a liability created by a borrower, which is expected to be repaid in a short period. Since a loan is a product, it will always have a price at which it is being sold. That price is called interest.

According to Diette (2000), interest is the money paid by a borrower to the lender for the use of his fund. It is a fee paid to the lender in exchange for his money. Okpiama (2014), described interest as the cost of borrowing money by the deficit unit. It is usually expressed as a percentage of principal on an annual basis. Interest could be simple or compound. Simple interest is the interest that is paid at the end of each year or at the expiration of time while the principal sum remains unchanged. Compound interest on the other hand is the interest that is not paid to the lender but added to the principal sum so that the interest that has been addedalso earns interest. According to Okpiama (2014), for most loans, interest is usually compounded. Although a borrower cannot avoid paying interest on loan, it is however possible to minimize the interest paid by maintaining a good credit rating, shopping around for the lowest rate, and offsetting the loan as soon as possible (Health, 1991). Longer maturity periods normally increase the cost of borrowing because lenders prefer short-term repayments dates over long-term repayment dates. The premium must be paid to encourage the lender to commit funds for a long period of time.

Most times, borrower pay interest on loan without having the understanding why they pay such interest. Masa, Imegi and Akenbor (2012) advanced some reasons why a lender charges interest on loan. These reasons include the riskiness of the investment, time value of money, opportunity cost, and the motive for profit.The lender's action of releasing his fund to the borrower is a risky venture because many environmental forces including job losses may hinder the borrower's ability to extinguish the loan. To instill financial discipline on the borrower and to minimize the lender's risk, interest is charged on the loan. Also, it is a common knowledge in finance that an amount of money received today is worth more than the same amount of money received tomorrow. This is probably due to inflationary factor prevailing in the economy.

As such, interest in charged by the lender so that future sum could be equivalent to the present amount, thereby restoring the lender to his initial position. Further, when there exist more than one alternative, there is an opportunity cost, which is the alternative forgone. The lender that parted with his fund for the borrower may have as well invested the fund instead of releasing it to the borrower. Again, the lender is deprived from present enjoyments for the sake of the borrower. These opportunity costs therefore call for interest on loan. Finally, the lender that parted with his money would attach a cost to the fund in order to realise profit. He sees interest as compensation for the loss of the asset's use.

Most loan users (borrowers) seem to be ignorant of the factors considered by a lender in charging interest, how the rate of interest on loan is being determined, and also why loan givers (lenders) would choose upfront interest repayment. More so, while previous studies may have examined sourcesof loan; why loan application fails? or problems associated with obtaining a loan, there exists little or no studies on the interest component of a loan. It is upon this premise that we intend to explore understanding interest component in a loan facility. Therefore, the objectives of this study are;

i) To examine the factors lenders consider in charging interest on loan
ii) To investigate how the rate of interest on loan is being determined
iii) To explore why lenders would choose upfront interest repayment

Literature Review

People generally seek loans out of financial need, or because they want to acquire an asset or pay their bills: a car, a vacation, a land, an extension to the home, house rent etc. Loans of this type are quite different from mortgages which finance house purchases. According to Eaglesham (1997), what characterizes most loans of this kind is that it is intended to be relatively short-term. It rarely extends for more than five years. It may take many different forms such as property loan, bills payment loan, small business loan etc. According to Okpiama (2014), a loan could be secured or unsecured. A secured loan means that the borrower has to put up some form of property as collateral in exchange for the loan. If the borrower defaults in payment or there is a material breach of the loan covenant, the lender may offer the property for sale in order to recover his money. An unsecured loan on the other hand, means that no property is used as collateral security in obtaining the loan, but an agreement to pay back the loan is reached by the parties.

For one to qualify for personal loan on unsecured basis, Health (1991) posits that the borrower must have an excellent credit rating, and must have a regular source of income (e.g. salaries or business profits).Whether a loan is secured or unsecured, the borrower will have to pay interest on the loan. According to Eaglesham (1997), interest is the cost of borrowing money on the basis that the principal is repaid in full at the end of the life of the loan while the cost is paid throughout the duration of the loan. When a borrower defaults in payment or there is material breach of a loan covenant default interest is imposed on the borrower. The default interest is usually higher than the original interest since it is reflecting the aggravation in the financial risk of the borrower (Diette, 2000).

Determinants of Interest Rate

There are certain factors a lender must consider in determining the rate of interest on loans. According to Lee and Hogarth (1999), these factors are; the kind of loan, cost of funding the loan, government regulation, economic condition, competitive parity, and credit rating. The nature of a loan is a considerable factor in determining the interest on a loan. A loan could be classified according to usage (mortgage loan, small business loan, car loan, etc) security (secured and unsecured loan), and duration (short term, medium term, or long-term loan). Mortgage loan, unsecured loan, and long term loan would attract high rate of interest while small business loan, secured loan, and short-term loan would attract low rate of interest (Lee and Hogarth, 1999).

Before a loan is made available for sale by the lender, he has to mobilize deposits from household, business, and government units. This involves both marketing and administrative costs. Moreso, when a borrower is to obtain a loan, certain documentations and processing costs are incurred by the lender. Okpiama (2014) noted that the total cost of making the loan available to the borrower is of concern to the lender in determining the amount of interest on the loan. Interest on loan is determined by the lender subject to government regulations such as the Central Bank of Nigeria (CBN) guidelines. Borrowers of high credit rating are charged lower rates on the guideline. Conversely, borrowers of low credit quality are charged higher rates because of higher rate of default (Diette, 2000).

The economic condition of the state or country also influences the interest a lender attaches on a loan. Economic factors including the level and growth in Gross Domestic Product (GDP), inflation, and money market volatility are important determinants of interest on loan. These factors also impact on the demand for loans, which can help push rates higher or lower. When demand is low, such as during economic recession, lenders would increase deposit rate to encourage savings mobilization or lower loan interest rate to motivate borrowers to take loan (Health, 1991).The interest competitors charge for a loan also affects the interest chargec by a lender. The lender takes the competitors into account in determining interest on loan. For example, co-operative societies charge between 7%-15% interest on-loan while banks charge between 15%-20% interest on loan. A lender could charge interest on loan based on competitive parity or what is applicable in a particular industry (Brigham, 1989).

When determining the rate of interest on loan, the lender considers the credit rating of the borrower. The borrower's credit rating is based on the 5Cs of credit, which include capital-character, capability, collateral, and condition (Akenbor, 2000). The lender must evaluate the amount of capital or assets available to the borrower. If the borrower asset base is high, his credit rating is assumed to be high and as such, a low interest is charged by the lender. The borrower's character or attitude towards loans equally needs to be assessed by the lender. If the borrower has the attitude of delaying payment of loan, a high rate of interest may be charged. But if the borrower is very prompt in the settlement of loan as provided from past histories, a low rate of interest may be charged.

Capability is the financial strength of the borrower, which equally has to be assessed in determining the rate of interest. If the borrower's level of liquidity is high, a low,rate of interest is charged, otherwise, interest rate could be high. Collateral is a security in exchange for a loan, which a lender also considers in charging interest on loan. When collateral is attached to a loan, the rate of interest is low, otherwise it is high. Moreso, the economic condition of the state is a determinant of the rate of interest on loan. If the economic condition is harsh and unfavourable, investment risk is high due to economic uncertainties; interest on loan is set high. But if the economic environment is certain and favourable, the level of risk is low, hence low rate of interest is charged on loan (Investing Answer, 2016).

How to Determine the Rate of Interest on Loan

For many borrowers, how lenders determine interest rate is a mystery. The common question borrowers ask is how do lenders decide what rate of interest to charge? As stated earlier, a loan is a product and interest is the price on the loan. Therefore, the mechanism businesses use in fixing product prices is the same mechanism lenders would used in charging interest on loan. However, Diette (2000) identified three methods of determining the rate of interest on loan. These are cost-plus pricing model, price-leadership model and risk-basec pricing model.

Cost Plus Pricing Model

This method assumes that the rate of interest charged on any loan includes foir components:

- the funding cost incurred by the lender to raise fund to lend;
- the operating cost of servicing the loan, which include application and payment processir £ including wages/salaries
- a risk premium to compensate the lender for the degree of default risk inherent in the loan request; and
- a profit margin on each loan that provides the lender with an adequate return on his capital (Diette, 2000)

Let us consider a practical example of how cost-plus pricing model works. If a loan request of N1000000 is made, the lender must obtain funds to lend. Assume that interest on deposits or cost of mobilizing saving is 5%, the operating cost of servicing the loan is estimated at 2% of the requested loan amount, a premium of 2% is added to compensate the lender for default risk, or the risk that the loan will not be paid on time or in full, and 1% profit margin is added on cost, the loan can be extended at the rate of 10%. Having assessed a borrower to be a low-risk borrower, the rate of interest on the requested loan cannot be less than 10%, and the rate of interest for a high risk borrower could be higher than 10%.

Price-Leadership Model

The shortcoming associated with the cost-plus loan pricing model is that it focused only on cost without any regard to competition from other lenders. According to Investopedia (2013), competition from financial institutions and other lenders significantly narrowed the profit margin for all lenders. This has resulted in many lenders using price-leadership in determining the rate of interest on loan. In this case, a prime or base rate is established by major lenders (e.g. banks), and it is the rate of interest charged to the most creditworthy borrowers on short-term loans. This price-leadership rate is important because it establishes a benchmark for other lenders. Therefore, to maintain an adequate business return in the price-leadership model, the lender must keep the funding and operating costs, as well as the risk premium as competitive as possible.

Risk-Based Pricing Model

Loan risk varies according to its characteristics and its borrower; hence the assignment of a risk or default premium is one of the most problematic aspects of determining the rate of interest on loan (Brigham, 1989). Risk-based pricing involves setting a default premium and finding optimal rates and cutoff points as a means of evaluating potential borrower. This is done through the credit scoring system, which is a computer programme used in setting an appropriate default premium when determining the rate of interest on loan charged to a potential borrower. To determine a credit score, borrowers' names and addresses are entered into the system and a credit score, which is usually between 400 and 825, is generated. A score above 710 is normally considered a good credit risk while a score under 620 is considered a very high risk.

Lenders that use risk-based pricing model can offer competitive prices on the best loans across all borrowers groups and reject or price at a premium those loans that represent the highest risks. The question is how does risk-based pricing model benefit a borrower who only wants a loan with reasonable repayment terms and an appropriate interest rate charged? Since the lender is determining a reasonable default premium based on past credit history, borrowers with good credit histories are rewarded for their responsible financial behaviour. Using risk-based pricing, the borrower with better credit will get a reduced price on a loan as a reflection of the expected lower losses the lender will incur. As a result, less risky borrowers do not subsidize the cost of credit for more risky borrowers. However, available research evidence reveals that the price-leadership model is the commonest rnethod of determining the rate of interest on loan across the globe.

Methods of Interest Repayment

There are different ways and manners interest on loan can be repaid. Lee and Hogarth (1999), identified three methods as concurrent interest repayment, upfront interest repayment, and backend interest repayment.

Concurrent Interest Repayment

With this kind of loan interest repayment, the borrower pays part of the principal sum and interest with each month payment. It arises from instalmental loan repayment arrangement where the instalmental loan amount is repaid with the associated interest. In this case, both the principal amount and interest are spread over the periodic instalments of the loan. At the time of maturity, both the principal amount and the interest are fully extinguished.

Upfront Interest Repayment

This occurs when the interest on loan is paid in advance. It does not require out of pocket payment of interest, but interest amount is deducted from the amount of loan requested and the net amount given to the borrower. Banks and other financial institutions equally use upfront interest method in the payment of interest to depositors. Banks use it as a strategy for attracting or mobilizing deposits or savings.

Backend Interest Repayment

This method of interest repayment requires that the interest amount is paid together with the principal sum at maturity. In otherwords, when the loan matures, the borrower is obligated to pay the principal sum plus interest back to the lender in one bulk payment.

Okpiama (2014), claims that among the three methods of interest repayment, borrowers feel more comfortable with the concurrent interest repayment. But most lenders are in favour of upfront interest repayment. Investopedia (2013) stated that most lenders are more disposed to upfront interest repayment for the following reasons:

- The lenders would want to make their money first, and probably invest it to yield returns. As at the time of maturity of the loan, the interest investment would have yielded reasonable returns.
- Upfront interest triggers the borrower to raise more than he actually needed. By so doing, more interest and profit accrue to the lender.
- It prevents the borrower from extinguishing the loan before maturity. The reason for early extinguishment of loan is to reduce the amount of interest, so if the interest amount is settled upfront there would be no need to extinguish the loan before maturity. This means more income for the lender.
- It helps to mitigate and reduce the risk of defaults. If interest is paid upfront and the borrower defaulted in payment of loan, the amount of risk of default is minimized.
- Part of the upfront interest is used to offset the processing cost of loan application since most borrowers are not comfortable with out of pocket payment of processing cost or loan.

Conclusion and Recommendations

Interest on loan is of considerable importance to both the loan giver and the loan taker. It is important to the lender because it is the profit realized from giving out a loan, but to the borrower it is the cost associated with taking a loan. When it comes to interest on loan, the lender tends to have full control; he decides both the rate and method of repayment without any input from the borrower. It is therefore imperative that borrowers have a better understanding of the interest component in a loan facility. A lender charges interest on loan because of the risk nature of the investment, time value of money, opportunity cost, and motive for profit. Although, the borrower cannot avoid paying interest on loan, he can however minimize the amount of interest payable by maintaining a good credit rating and offsetting the loan as soon as possible.

Before a lender charges interest on loan, he considers the nature of the loan, the cost of acquiring the fund that is used as loan, government regulation, economic condition, competitive parity, and credit rating of the borrower. For most borrowers, the way interest is charged on loan by the lender is a mystery. But this shouldn't be so, because interest is the price on loan and the methods of pricing used by businesses generally are applicable. However, in this study, we identified three methods of determining the rate of interest on loan, which include cost-plus pricing, price - leadership, and risk-based pricing. Among these methods, price leadership appears to be more popular.

There are different methods of interest repayment, which include concurrent interest repayment, upfront interest repayment, and backend interest repayment. But it has been observed that while borrowers feel more comfortable with the concurrent interest repayment, lenders are interested in upfront interest repayment for several reasons. In view of the above discussions, the following recommendations are made.

i) Lenders including credit unions should ensure they charge a lower interest when the amount of loan involved is high.
ii) Concurrent interest repayment should be entertained while up front interest repayment should be discouraged.
iii) In determining the rate of interest on loan, price-leadership method should be adopted by lenders.

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