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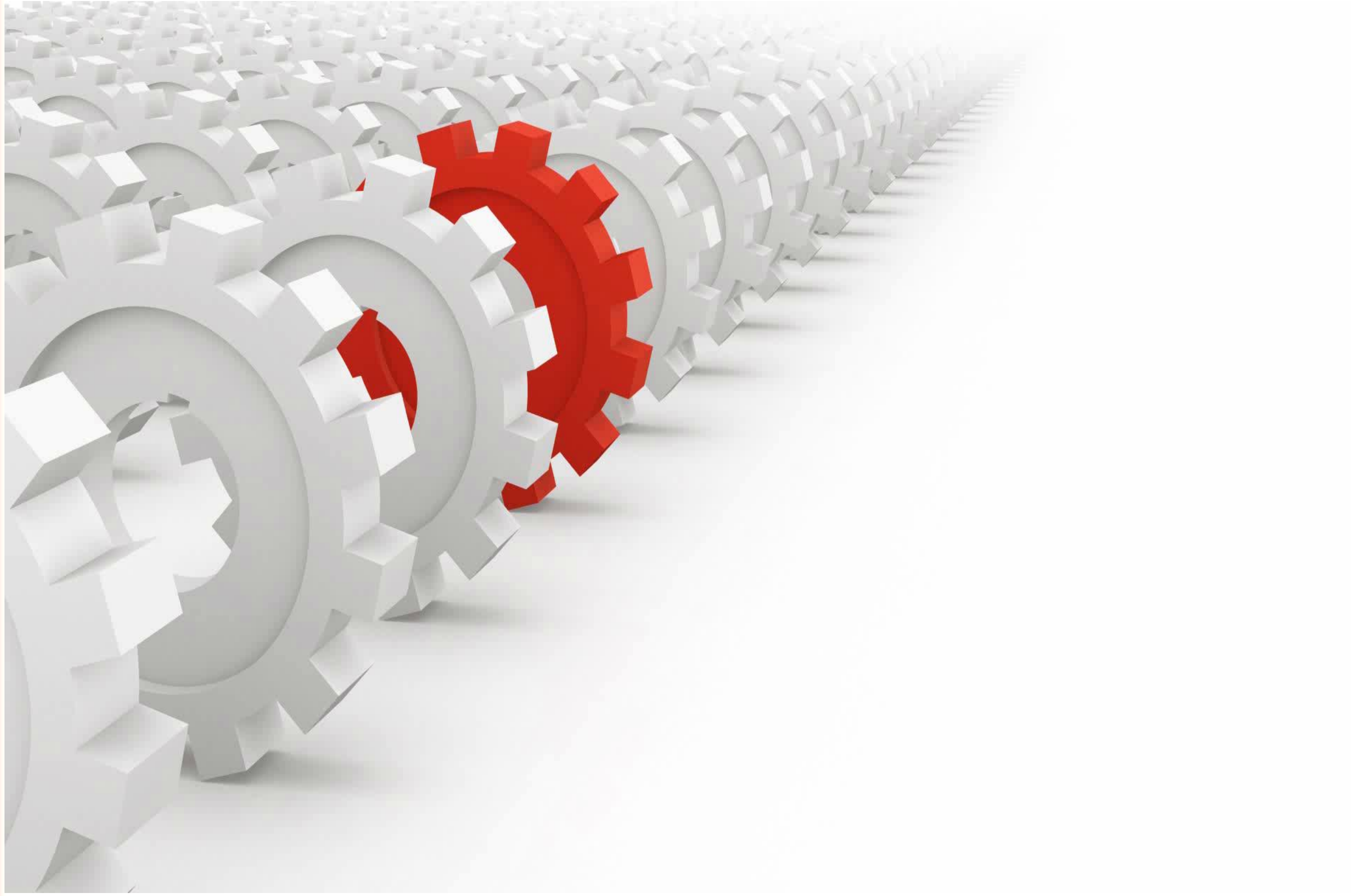

Amortization Concept

November 2022

Hello!

What is an Amortization Schedule?

A table that provides the details of the periodic payments for an amortizing loan. The principal of an amortizing loan is paid down over the life of the loan. Typically, an equal amount of payment is made every period.

Amortization Schedule

- An amortization schedule can be generated by an amortization calculator, with the inputs of the amount, periodic terms, and interest rate of the loan.

- Through amortization schedules, borrowers can better plan and track how much they still owe and how they will be repaid.

Amortization Schedule

- The loan amount, interest rate, term to maturity, payment periods, and amortization method determine what an amortization schedule looks like.

- Amortization methods include the straight line, declining balance, annuity, bullet, balloon, and negative amortization.

How do Amortization Schedules work?

- Periodic payments are made for amortizing loans, such as a car or home mortgage. Each payment consists of two components – interest charge and principal repayment. The percentage of interest or principal repayment varies for different loans.

- The amount of interest charged for each period depends on the predetermined interest rate and the outstanding balance of the loan. The remaining portion of the periodic payment is applied to repay the principal. Only the portion of the principal repayment reduces the remaining loan balance.

How do Amortization Schedules work?

- With a specified loan amount, the number of payment periods, and the interest rate, an amortization schedule identifies the total amount of the periodic payment, the portions of interest, the principal repayment, and the remaining balance of the loan for every period.

- Typically, the remaining balance of an amortizing loan diminishes as time passes, with principals repaid. Thus, the interest amount for each period also decreases over time, and the principal repayment increases gradually.

Methods for the Amortization Schedule

There are multiple methods to amortize a loan. Different methods lead to different amortization schedules.

1. Straight line

The straight-line amortization, also known as linear amortization, is where the total interest amount is distributed equally over the life of a loan. It is a commonly used method in accounting due to its simplicity.

With fixed periodic total payment and interest amount, the principal repayment is also constant over the life of the loan.

Methods for the Amortization Schedule

2. Declining balance

The declining-balance method is an accelerated method of amortization where the periodic interest payment declines, but the principal repayment increases with the age of the loan.

In such a method, each periodic payment is greater than the interest charged (interest rate times the beginning loan balance of the period); the remaining part repays the principal, and the loan balance declines.

The declining loan balance leads to lower interest charges, and thus accelerates the repayment of the principal.

Methods for the Amortization Schedule

3. Annuity

A loan amortized in the annuity method comprises a series of payments made between equal time intervals. The payments are also typically made in equal amounts.

There are two types of annuity: **ordinary annuity**, for which payments are made at the end of each period, and **annuity due**, for which payments are made at the beginning of each period.

Different types of annuities can cause a slight difference between their amortization schedules. The higher the interest rate or the longer the loan life, the greater the difference. The amortization schedule example above uses the ordinary annuity method.

Methods for the Amortization Schedule

4. Bullet

Bullet loans are not typically amortized over the life of loans. Generally, the periodic payments of a bullet loan cover the interest charges only.

It leaves a large amount of the final payment at the maturity of the loan, which repays the entire principal.

Therefore, the balance outstanding of a bullet loan remains unchanged over the life of the loan and is lowered immediately to zero at maturity.

Methods for the Amortization Schedule

5. Balloon

A balloon loan is similar to a bullet loan, which usually repays its entire principal at maturity.

Occasionally, it is amortized with small amounts of principal repayments, but still leaves the majority paid at maturity.

In such a case, the balance outstanding slightly decreases over the loan life and falls to zero at maturity.

Methods for the Amortization Schedule

6. Negative amortization

In the negative amortization method, the total payment of a period is lower than the interest charged for that period.

It means that there is nothing left from the periodic payment to repay the principal, and the remaining interest charge will accumulate to increase the outstanding balance of the loan.

The loan balance increases over time and will be repaid at maturity.

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Thank You

Questions?