

Amortization (business)

In business, **amortization** refers to spreading payments over multiple periods. The term is used for two separate processes: amortization of loans and amortization of intangible assets.

Amortization of loans

In lending, **amortization** is the distribution of payment into multiple cash flow installments, as determined by an [amortization schedule](#). Unlike other repayment models, each repayment installment consists of both [principal](#) and [interest](#). Amortization is chiefly used in [loan](#) repayments (a common example being a [mortgage loan](#)) and in [sinking funds](#). Payments are divided into equal amounts for the duration of the loan, making it the simplest repayment model. A greater amount of the payment is applied to interest at the beginning of the amortization schedule, while more money is applied to principal at the end. Commonly it is known as EMI or [Equated Monthly Installment](#).^[1]

$$P = A \cdot \frac{1 - \left(\frac{1}{1+r}\right)^n}{r}$$

or, equivalently,

$$A = P \cdot \frac{r(1+r)^n}{(1+r)^n - 1}$$

where: P is the principal amount borrowed, A is the periodic amortization payment, r is the periodic interest rate divided by 100 (nominal annual interest rate also divided by 12 in case of monthly installments), and n is the total number of payments (for a 30-year loan with monthly payments $n = 30 \times 12 = 360$).

[Negative amortization](#) (also called deferred interest) occurs if the payments made do not cover the interest due. The remaining interest owed is added to the outstanding loan balance, making it larger than the original loan amount.

If the repayment model for a loan is "fully amortized," then the very last payment (which, if the schedule was calculated correctly, should be equal to all others) pays off all remaining principal and interest on the loan. If the repayment model on a loan is not fully amortized, then the last payment due may be a large [balloon payment](#) of all remaining principal and interest. If the borrower lacks the funds or assets to immediately make that payment, or adequate credit to refinance the balance into a new loan, the borrower may end up in [default](#).

Amortization of intangible assets

In [accounting](#), amortization refers to expensing the acquisition cost minus the residual value of [intangible assets](#) (often [intellectual property](#) such as [patents](#) and [trademarks](#) or [copyrights](#)) in a systematic manner over their estimated useful economic lives so as to reflect their consumption, expiry, obsolescence or other decline in value as a result of use or the passage of time.

A corresponding concept for tangible assets is [depreciation](#). Methodologies for allocating amortization to each accounting period are generally the same as for depreciation. However, many intangible assets such as [goodwill](#) or certain [brands](#) may be deemed to have an indefinite useful life and are therefore not subject to amortization (although goodwill is subjected to an impairment test every year).

Amortization is recorded in the [financial statements](#) of an entity as a reduction in the [carrying value](#) of the intangible asset in the [balance sheet](#) and as an expense in the [income statement](#).

Under [International Financial Reporting Standards](#), guidance on accounting for the amortization of intangible assets is contained in IAS 38.^[2] Under [United States generally accepted accounting principles \(GAAP\)](#), the primary guidance is contained in FAS 142.^[3]

While theoretically amortization is used to account for the decreasing value of an [intangible asset](#) over its useful life, in practice, many companies will "amortize" what would otherwise be one-time expenses by listing them as a capital expense on the [cash flow statement](#) and paying off the cost through amortization, thereby improving the company's [net income](#) in the fiscal year or quarter of the expense.^[4]

References

1. ["~What is an EMI ? ~ Equated Monthly Installment"](#). Tech-bie.blogspot.com. 2011-07-15. Retrieved 2012-11-23.
2. ["International Accounting Standard 38, Intangible Assets"](#). Iasb.org. Retrieved 2012-11-23.
3. ["Statement of Financial Accounting Standards No. 142, Goodwill and Other Intangible Assets"](#). Fasb.org. Retrieved 2012-11-23.

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