

The SaaS LTV Cheat Sheet

What's LTV?

Customer Lifetime Value, or LTV, represents a customer's average revenue before they cancel, subtracting the gross margin. In SaaS businesses, it's typically a future estimate, not a measure based on historical data.



Why is LTV valuable?

It helps in managing acquisition spending by providing a clear spending limit. If your LTV is 'X,' you can confidently allocate 'Y' to acquire customers with minimal risk. It also aids in determining the payback period—how long it takes for a customer to cover their acquisition cost. The shorter the period, the lower the risk for the business.

Basic LTV Formula

The "basic" LTV formula is a widely accepted starting point for estimating the LTV of SaaS customers

$$LTV = \frac{ARPA \times \text{Gross Margin}}{\text{Customer Churn Rate}}$$

It involves two key factors:

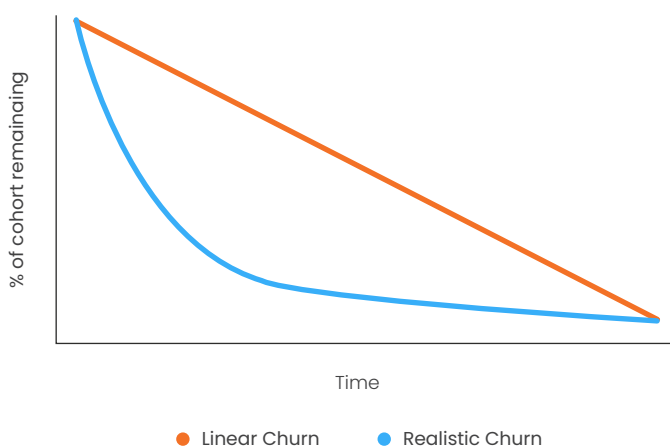
- **ARPA (Average Revenue Per Account):** This is the average Monthly Recurring Revenue (MRR) across all active customers.
- **Gross Margin:** It's the difference between revenue and Cost Of Goods Sold (COGS). In SaaS, this margin is typically high, often exceeding 80%.

Shortcomings of the Basic LTV Formula:

- Assumes linear churn over time, which isn't normal for many SaaS businesses. Churn tends to be higher in the early stages of the subscription.
- Doesn't consider expansion. If customers frequently upgrade their plans, it significantly affects LTV but isn't factored into the basic formula.
- Generates an overly optimistic estimate of LTV. Factors like future risks are overlooked, providing an estimation that may not align with potential challenges.

The impact of Churn on LTV:

The basic LTV formula suggests that churn occurs evenly throughout the lifespan of a cohort. However, in reality, this rarely happens. In most cases, businesses experience higher churn within the initial three months of a cohort, gradually decreasing in the subsequent months.






The influence of account expansion on LTV:

Consider Customer X on a \$100 monthly plan, expected to churn after 1 year, resulting in an LTV of \$1200.

Now, compare this with Customer Y, also on a \$100 monthly plan initially, with an expected churn after 1 year. However, Customer Y upgrades to a \$150 monthly plan in month 4 and further upgrades to a \$180 plan in month 8. As a result, the LTV for Customer Y is \$1800, showcasing a noteworthy difference!

Moving toward a more "advanced" LTV estimate:

SaaS Metrics expert David Skok (@BostonVC) introduces a new formula for projecting LTV, considering factors overlooked by the basic formula:

-  **Reduced value of money over time:**
This involves modeling the diminishing value of money when viewed as a future resource. Essentially, a dollar today holds a higher value than a dollar in the future.
-  **Risk:**
Particularly in the startup arena, there's considerable risk, including changes in the global market, technological obsolescence, and intense competition.
-  **Customer growth:**
Numerous mature SaaS businesses witness robust Monthly Recurring Revenue (MRR) growth throughout the customer lifetime, sometimes leading to negative churn.

Incorporating these elements into the LTV formula yields a more pessimistic projection yet grounded in reality.

What expenses should be factored into the Gross Margin?

Include:

- Hosting fees and other third-party web expenses
- Support costs
- Onboarding expenses
- Account management expenses

Don't Include:

- Credit card fees
- Software development costs

Expanding on the "David Skok" formula:

Here's the comprehensive breakdown:

$$LTV = ARPA \times Gross\ Margin \times \left(\frac{1}{(1-K)} + \frac{G \times K}{(1-K)^2} \right)$$

New elements introduced in this formula:

G represents the annual growth rate for customers who remain active.

K signifies a value reduction factor, calculated as follows:

$$K = (1 - Customer\ Churn\ Rate) \times (1 - Discount\ Rate)$$

Discount Rate is a predetermined annual rate tailored to your needs, considering factors like risk and the diminishing value of money over time (refer to the opposite side). David recommends a Discount Rate ranging from 20% to 25% for businesses in their pre-scale stage.

Example

Let's consider a fictional SaaS company with 500 customers, collectively generating \$150,000 in Monthly Recurring Revenue (MRR), resulting in an Average Revenue Per Account (ARPA) of \$300. The business maintains a Gross Margin of 80% and experiences a monthly customer churn rate of 8%. Adopting a Discount Rate of 15% due to its pre-scale status, alongside a monthly growth rate of non-churned customers at 20%, the basic LTV formula suggests an LTV of \$3,750. However, when applying the David Skok formula, the projected LTV is calculated to be \$2,200. This showcases Skok's formula providing a more conservative LTV estimate, attributed to its consideration of value discounting factors.

If you want to calculate the CLV of your business in real time, then Saffron Edge can help you!