# LTV:CAC Trend Analysis (2015–2020)

**Quick KPI Snapshot**

* **Average LTV:CAC Ratio:** 102.86 (Constant across all months)
* **Max LTV:CAC Ratio:** 102.86
* **Min LTV:CAC Ratio:** 102.86

This constant value implies that LTV:CAC has been calculated using a fixed ratio throughout the data as we have used the assumption model.

But in **real-world startup contexts**, the value may range as follows,

| **LTV:CAC Ratio** | **What It Indicates** |
| --- | --- |
| **< 1** | You're **losing money** on each customer. Your CAC is higher than the value that customer brings. Unsustainable. |
| **1–3** | Poor economics. Still not profitable per customer; needs work on retention or cost control. |
| **3–5** | **Sustainable** and typical for early-stage startups. Indicates good balance. |
| **5–10** | Healthy — indicates you're making significant value from each customer vs. what you spend. |
| **> 10** | Very strong — might even suggest **under-investment in growth** (if CAC is too low). Consider scaling faster. |

# 2. Customer Acquisition Cost (CAC)

* **CAC = Total Marketing Spend / New Customers**
* Represents the **cost to acquire one customer**.
* **Trends to Watch:**
  + **Increasing CAC**: Could suggest saturation, inefficient channels, or competition.
  + **Decreasing CAC**: Implies improved targeting, word-of-mouth, or better funnel efficiency.

**Real-World CAC Benchmarks:**

| **Industry** | **Avg CAC (USD)** |
| --- | --- |
| SaaS | $200–$1,000+ |
| eCommerce | $10–$100 |
| Fintech / B2B Startups | $500–$3,000+ |

For our dataset with assumption model, CAC ranges from ~₹3,000 to ₹220,000+ (variable across periods), which is high in some months — especially 2019–2020, indicating expensive acquisition (possibly due to niche segments or increased competition).

# 3. Lifetime Value (LTV)

* **LTV = Revenue per Customer × Gross Margin × Average Customer Lifespan**
* Reflects **expected revenue from a customer over their lifetime**.
* High LTV justifies higher CAC.

**Risks:**

* Overestimating LTV can lead to **overspending on CAC**, especially if churn is underestimated.
* If LTV is modeled too optimistically (as in this dataset), it can **distort the unit economics**.

# 4. Burn Rate

* **Burn Rate = Expenses – Revenue (if pre-profit) or just monthly cash outflow**
* Indicates how fast a startup is spending its capital.

**Real-world interpretation:**

| **Burn Rate Type** | **Meaning** |
| --- | --- |
| **High Burn Rate** (w/o revenue growth) | Dangerous. Startup may run out of cash quickly. |
| **Controlled Burn** | Typical in early growth. Acceptable with strong funding runway. |
| **Zero/Negative Burn** | Indicates profitability or break-even. Desirable post-Series B+. |

For our dataset:

* Burn rate increases substantially over years (e.g. 2019, 2020).
* Total monthly expenses exceed revenues in most months → **indicative of high burn**, standard for pre-profit scaling startups.

# 5. Revenue per Customer (RPC)

* **RPC = Total Revenue / New Customers**
* Helps evaluate **average customer value** on a per-user basis.
* Can indicate pricing effectiveness or customer segmentation value.

**Trends to Explore:**

* Rising RPC → Better monetization, upsells, or higher ARPU segments.
* Falling RPC → Could indicate price cuts or acquisition of lower-value customers.