REVENUE OPERATIONS & AI

Net revenue retention is a cohort definition

Net revenue retention is a cohort definition before it is a growth metric. Fix the population, revenue boundary and time window before comparing it.

Sinan Isoglu, MBA (Quantic)

Commercial growth leader, lecturer and doctoral researcher

PUBLISHED

20 August 2026

READING TIME

5 min

WORDS

1,025

https://isoglu.com/insights/journal/net-revenue-retention-is-a-cohort-definition/

CONTENTS

MANAGEMENT SUMMARY

Net revenue retention looks like a simple formula: start with a customer cohort, subtract churn and contraction, add expansion, and divide by the starting revenue. The difficult part is not the arithmetic. It is deciding which customers belong in the cohort, which revenue counts, how pricing and currency are treated, and whether the definition stayed still over time. This article turns the metric into a reproducible reading process. It shows why two companies can publish the same percentage while measuring different populations, why a changing definition can make a historical trend look stronger or weaker than it is, and which fields to preserve before a retention number enters a forecast, valuation or acquisition model.

Keywords: Net revenue retention · Net dollar retention · Cohort analysis · SaaS metrics

Net revenue retention is a cohort definition before it is a growth metric. The familiar arithmetic is straightforward. The starting population, revenue boundary and observation window are where the meaning lives.

A simplified practical expression is:

NRR = (starting recurring revenue minus churn minus contraction plus expansion) divided by starting recurring revenue.

The formula describes a fixed base. If new customers enter the numerator, or if the revenue definition changes between periods, the result is no longer a clean read of what happened to the starting cohort.

Why is Net Revenue Retention fundamentally a cohort definition?

The first line in an NRR calculation should name the customers who were eligible at the start of the window. “Customers at the beginning of the year” is not enough if the company changes its definition of customer, excludes small accounts, moves accounts between products or treats an acquisition as organic expansion.

The starting revenue also needs a definition. Contracted recurring revenue, recognised revenue, subscription and support revenue, usage revenue and services revenue can each produce a different metric. None is automatically wrong. They answer different questions.

Table 1 The NRR formula with its boundaries restored

Term	Include	Decide before calculating
Starting cohort	Customers eligible at the beginning of the window	Customer status, product scope and acquisition treatment
Starting revenue	Recurring revenue attributed to that cohort	Contracted, recognised, subscription, usage or total recurring basis
Churn	Revenue removed because the customer leaves	Full account, product, region and timing treatment
Contraction	Revenue lost while the customer remains	Downgrade, seat reduction, usage decline and price change
Expansion	Additional revenue from the starting cohort	Cross-sell, upsell, price increase and usage growth
Exclusions	Items intentionally left out	Acquisitions, currency, credits, services and one-time items

Author's operating worksheet, aligned with the disclosure and cohort-definition issues in the cited SEC guidance and public filing review.

A stable number can still change its meaning

The definition has a shorter memory than the number shows the practical problem. A company can continue publishing NRR while changing how it defines the metric. The historical series remains numerically tidy. The comparison is not.

The right response is not to distrust every disclosure. It is to keep the definition beside the number. When the company changes the cohort, the revenue basis, the period or the treatment of currency, record the change as part of the data. A recalculated prior period can improve comparability. An unannounced change should not be silently treated as a continuation.

There is also a difference between a metric disappearing and a cohort disappearing. The metric did not die. The cohort did tracks the public disclosure question. The commercial reader still needs the private version: which customers are in the cohort, what they bought, what expanded and which definition was used.

NRR is not a customer-quality score

An NRR above 100% means that the starting cohort produced more revenue on the chosen basis by the end of the window. It does not mean every customer expanded. A few large expansions can offset many small contractions. The metric is therefore a portfolio result, not a quality score for an individual account.

The same issue appears across segments. Enterprise NRR can be high because a small number of large accounts expanded. Self-serve NRR can be lower because the cohort has more small accounts and more early churn. Comparing the percentages without the starting distribution can turn a mix difference into a product conclusion.

The metric also does not show who owns the relationship. If expansion relies on a salesperson or partner, the future value may not be transferable even when the historical cohort looks strong. That is why a retention review belongs beside the relationship ownership questions in what the customer relationship costs while it stays.

Table 2 The NRR comparability audit

Check	Yes means	No means
Same cohort rule	The starting populations are constructed the same way	The percentages are not directly comparable
Same revenue basis	Both measures use the same recurring revenue concept	Explain the boundary before comparing
Same window	The periods have the same length and timing	Seasonality may be part of the difference
Same currency treatment	Foreign exchange is handled consistently	Separate price, usage and currency effects
Same definition over time	The series has a stable meaning	Mark a break or restate the history
Same segment mix	The populations have a comparable distribution	Interpret the result as portfolio composition

Author's worksheet. Each row is a yes-or-no test before two retention percentages are compared.

Put the metric into the forecast carefully

NRR is useful in a forecast when the forecast carries the conditions. Start with the cohort, split churn, contraction and expansion, and show the distribution behind the aggregate. Then test what happens if a large expansion account is removed, if the currency effect is isolated, or if one segment is reweighted.

Do not use NRR to conceal acquisition economics. New customers do not repair a weak starting cohort inside the metric. Do not use it to stand in for customer lifetime value. LTV also needs contribution margin, cost to serve, acquisition cost and a horizon.

The final rule is simple: keep the definition on the same page as the number. If the definition cannot be reconstructed from the data, the percentage can still be reported as management's chosen metric. It is not yet a comparable measure of the customer base.

Evidence base. The analytical frame also draws on these additional sources: U.S. Securities and Exchange Commission 2020; Ordway Labs 2024; Gustafson 2024. The links identify the exact works; they support the mechanisms and boundary conditions discussed here, not every claim in isolation.

U.S. Securities and Exchange Commission. (2020). Commission guidance on management's discussion and analysis of financial condition and results of operations (Release No. 33-10751). https://www.sec.gov/rules/interp/2020/33-10751.pdf

Ordway Labs. (2024). Dollar-based net retention rate: How public companies report. https://ordwaylabs.com/resources/research/how-public-companies-calculate-net-revenue-retention/

Gustafson, C. J. (2024). NDR is slowly being euthanized. Mostly Metrics. https://www.mostlymetrics.com/p/ndr-is-slowly-being-euthanized-3cf4

END OF ESSAY

HOW TO CITE THIS ESSAY

Isoglu, S. (2026, August 20). Net revenue retention is a cohort definition. Sinan Isoglu. https://isoglu.com/insights/journal/net-revenue-retention-is-a-cohort-definition/

KEEP READING

Revenue operations & AI

Revenue analytics needs an event schema

https://isoglu.com/insights/journal/revenue-analytics-needs-an-event-schema/

Revenue operations & AI

CAC payback is a cash calendar

https://isoglu.com/insights/journal/cac-payback-is-a-cash-calendar/

Revenue operations & AI

What is CRM data governance? Revenue control before reporting

https://isoglu.com/insights/journal/what-is-crm-data-governance/

Sinan Isoglu, MBA (Quantic)
Commercial growth leader, lecturer and doctoral researcher

Online version: https://isoglu.com/insights/journal/net-revenue-retention-is-a-cohort-definition/