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The 20-55 rule: customer prioritization misclassifies the portfolio

A customer ranking can miss future top customers: keep prediction horizon, cutoff, misclassification cost, and profitability inputs visible.

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MANAGEMENT SUMMARY

A customer ranking is a forecast, not a permanent identity. Malthouse and Blattberg evaluate customer lifetime-value prediction out of sample across four datasets and report an approximate 20-55 pattern: many customers who will belong to the future top 20% are not identified by the earlier ranking, while a smaller share of the future bottom 80% may receive special treatment. The figures belong to the stated horizon, groups, and treatment setting. Mulhern adds the adjacent measurement discipline: specify the inputs and inspect how profit is concentrated before allocating disproportionate attention. This article turns the evidence into a portfolio review card. It does not rank current accounts, equate revenue with profit, or present 20-55 as a universal law.

Keywords: Customer lifetime value · Customer profitability · Portfolio decision · Misclassification cost

A customer ranking is a forecast, not a permanent identity.

The short answer is that a cutoff can be useful and still miss many customers who will later belong to the top value group. Malthouse and Blattberg evaluate customer lifetime-value prediction out of sample across four datasets and report an approximate 20-55 pattern. Roughly, 55% of the future top 20% may be misclassified and not receive special treatment, while about 15% of the future bottom 80% may be misclassified and receive it. Those are reported results for the study's groups, horizon, and treatment setting. They are not a universal portfolio law.

Mulhern supplies the necessary adjacent discipline. Customer-profitability analysis depends on explicitly specified inputs and on understanding how profit is concentrated across customers. A predicted value rank is therefore not enough. The review must show the forecast horizon, cutoff, error cost, and profitability object before attention is allocated.

Why do historically predicted customer tiers fail to match future profitability cohorts?

The 20-55 phrase is easy to remember because it compresses a classification problem into two numbers. It is also easy to misuse. The "top 20%" in the result is the future group defined by later customer value. The ranking used to select customers is an earlier prediction. The 55% figure describes misclassification inside that future top group under the study's setup. It does not say that 55% of every top segment is always wrong.

Keep the objects separate:

Table 1 Why do historically predicted customer tiers fail to match future profitability cohorts?

Object	Question	Mistake if it is collapsed
Predicted group	Who does the model select at the decision date?	A forecast is treated as an observed outcome.
Future group	Who belongs to the value group after the stated horizon?	The result is read without its time boundary.
False exclusion	Who later belongs in the target group but was not selected?	Missed opportunity is hidden.
False inclusion	Who is selected but later belongs outside the target group?	Treatment cost is hidden.
Profitability object	What value, cost, price, and margin inputs are being aggregated?	Revenue or activity is treated as profit.

Table from this essay. Sources and interpretation are given in the article.

The ranking is a decision aid under uncertainty. It is not a label attached to the customer.

Figure 1 The customer-prioritization misclassification card

Review field	Predicted at decision date	Future or observed check	Decision question
Group	Which cutoff and model create the selected group?	Which group is defined after the horizon?	Is the comparison time-consistent?
False exclusion	Who was not selected?	Who later enters the target group?	What is the cost of missing them?
False inclusion	Who was selected?	Who later remains outside the target group?	What attention or service cost was spent?
Profitability	Which inputs form predicted value?	Which revenue, cost, price, and margin fields are realized?	Are the forecast and outcome objects the same?
Refresh	When is the rank recalculated?	When can the outcome be evaluated?	Does the horizon match the decision?

Author's portfolio review framework grounded in Malthouse and Blattberg (2005) and Mulhern (1999). The percentages are shown only as bounded source results; the matrix prompts are synthetic and contain no customer data.

What does empirical analysis of four enterprise datasets reveal about the 20/55 rule?

Malthouse and Blattberg evaluate out-of-sample customer lifetime-value prediction across four industry datasets. Their question is not whether a model can sort historical customers. It is whether a firm can identify future high-value customers accurately enough to justify disproportionate investment.

The reported approximate 20-55 pattern makes the error visible. Of the future top 20%, approximately 55% may be misclassified and not receive special treatment. Of the future bottom 80%, approximately 15% may be misclassified and receive special treatment. The first figure is a false-exclusion problem. The second is a false-inclusion problem. Neither is meaningful without the future horizon, the predicted groups, the definition of special treatment, and the costs attached to the errors.

The article’s value is not the memorized ratio. It is the reminder that a historical ranking can be accurate enough to look useful while still failing the customers a firm most wants to find. A portfolio decision should therefore ask how much error it can carry and how quickly the ranking can be refreshed.

Do not reverse the result into a new slogan. The study does not say every ranking misses 55% of future top customers. It does not say every selected customer is a poor investment. It gives an approximate result in four datasets under a stated prediction setting.

How does measurement time horizon reshape the accuracy of customer tier cutoffs?

A ranking is issued at a point in time. The future group is evaluated later. If the horizon is short, the model may mostly extend recent behavior. If the horizon is longer, new purchases, defection, service cost, price, and changing needs can alter the value order. A model can therefore have different error patterns at different horizons without contradiction.

The release card should record the issue date, the outcome window, the customer unit, the cutoff, and the refresh cadence. “Top customers” is not a sufficient label. Top by what object, observed when, and for which decision?

This also protects against a common transfer error. A noncontractual customer setting does not automatically describe a subscription business with contract renewal, a B2B account with negotiated pricing, or a marketplace with multiple service costs. The source result can motivate a test. It cannot silently become a benchmark for a different relationship structure.

Why is customer profitability an input attribution problem before a ranking exercise?

Mulhern’s customer-profitability framework starts with measurement. The analysis needs explicit inputs and an understanding of how profit is concentrated across customers. That sounds basic, but it changes the portfolio question. A customer can have high revenue and high service cost. Another can buy less and create a more attractive contribution after the declared cost boundary. A third can be valuable under one horizon and unattractive under another.

The ranking model and the profitability analysis may use different objects. A predicted customer lifetime value can be a model output. Realized profit is an outcome after revenue, discounts, service effort, cost, and timing are accounted for. The two can be compared only when their definitions and horizons are explicit.

The practical consequence is not that every firm needs a perfect cost system before making a decision. It is that the decision should state which uncertainty it accepts. If the model ranks likely future revenue, do not describe it as a profitability ranking. If it ranks contribution after a stated service cost, keep that boundary visible when the result is used by another team.

What does a synthetic portfolio simulation expose about traditional account tiering?

Imagine a team with a model-selected group and a future evaluation window. The team can create four review cells without inventing a customer score:

1. selected now and high value later;
2. selected now and outside the future target group;
3. not selected now and high value later;
4. not selected now and outside the future target group.

The third cell is not merely a model failure. Its cost depends on what special treatment would have changed. The second cell is not merely waste. Its cost depends on attention, service capacity, discounting, and the opportunity

cost of excluding another customer. This is why the error-cost fields belong in the portfolio review before the cutoff is defended.

The same matrix also creates a learning loop. Recalculate after the declared horizon, inspect which inputs changed, and revise the model or the treatment policy separately. A ranking error may come from prediction, from a changed outcome definition, from a changed horizon, or from an intervention that altered the future path. The matrix does not identify the cause by itself.

What governance sequence prevents misallocation in account-based prioritization?

Before a customer ranking becomes a resource-allocation instruction, record:

1. the customer unit and the value or profitability object;
2. the issue date and prediction horizon;
3. the model, cutoff, and selected group;
4. the future group and evaluation window;
5. false-exclusion and false-inclusion definitions;
6. treatment cost, service capacity, and the cost of a missed customer;
7. the input boundary for revenue, cost, price, margin, and timing;
8. the refresh date and the result that would change the policy.

This sequence makes the 20-55 result useful without turning it into a target. It also keeps customer profitability analysis honest. The portfolio receives attention because a decision has declared a value object and an error tolerance, not because a historical rank has acquired moral status.

Where are the methodological boundaries of portfolio tiering research?

The sources do not rank the current customer portfolio. They do not establish that a 20-55 cutoff is optimal, that all long-life customers are profitable, or that customer lifetime value equals realized profit. Malthouse and Blattberg supply a bounded out-of-sample misclassification result. Mulhern supplies the measurement and concentration discipline. The portfolio card is the author's translation between them.

The stopping rule is concrete. Do not use a cutoff as an investment command until the predicted group, future group, horizon, error costs, profitability inputs, and refresh date are written together. If any one is missing, the rank may still be computable. The portfolio decision is not yet fully specified.

The ranking boundary connects to customer selection as resource allocation and retention ranked by profit rather than churn alone.

Malthouse, E. C., and R. C. Blattberg. (2005). Can We Predict Customer Lifetime Value? Journal of Interactive Marketing, 19(1), 2-16. DOI

Mulhern, F. J. (1999). Customer Profitability Analysis: Measurement, Concentration, and Research Directions. Journal of Interactive Marketing, 13(1), 25-35. DOI

END OF ESSAY

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