

WTF is Marketplace Liquidity?

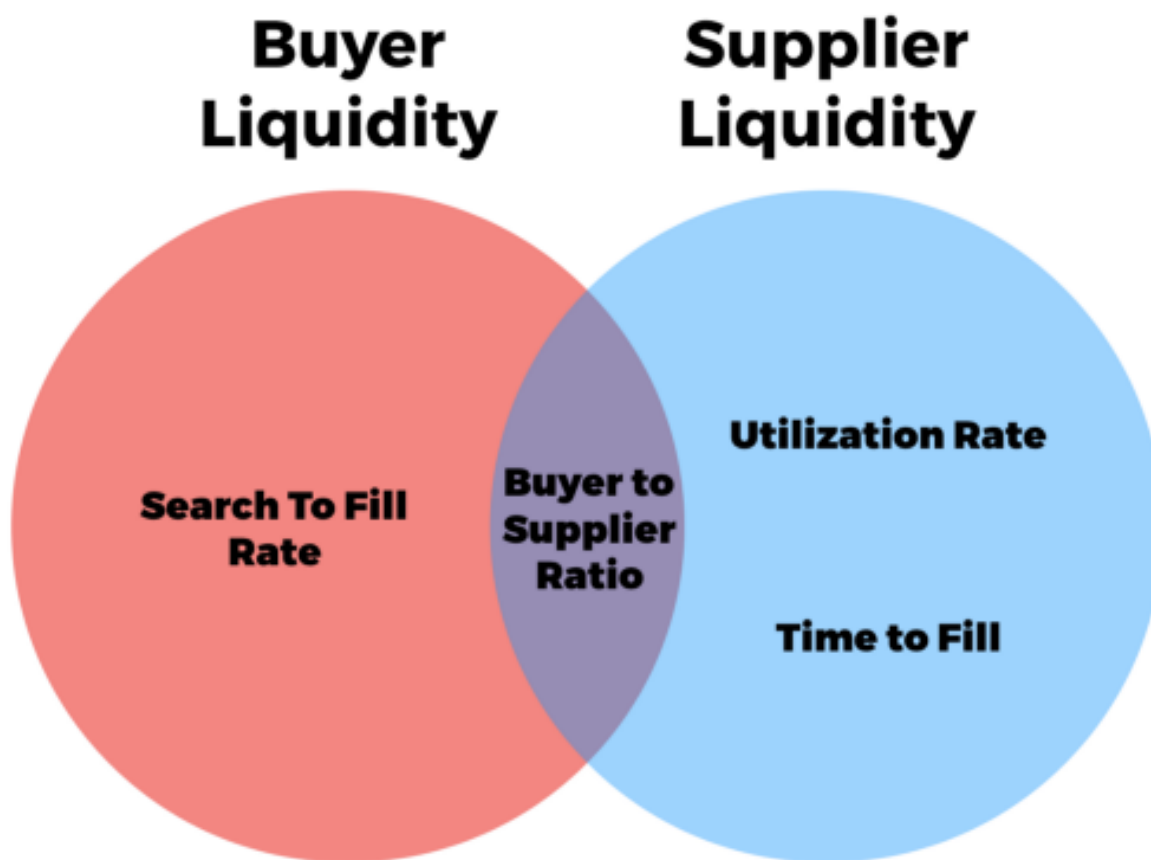


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Methodologies for understanding and measuring marketplace liquidity



When first interviewing at Point Nine, I was asked to define marketplace liquidity. At the time, I had a vague understanding of liquidity and luckily gave a good enough answer to make it through the interviews. That being said, I had never given much thought to how exactly you go about understanding its key drivers and measuring it. Over a year later,

having spoken to hundreds of different marketplaces, I'm finally getting to the bottom of WTF marketplace liquidity is all about.

Liquidity is the lifeblood of marketplaces. It is the efficiency with which a marketplace matches buyers and sellers on its platform. One could say that a marketplace without liquidity has no real product because the ability to transact on the platform IS the product. The concept of liquidity is relatively easy to understand, however, measuring it is much trickier.

Most marketplace startups I speak to tend to focus on metrics like GMV, net revenue, number of users, average order value and CAC vs LTV. Whilst these metrics are fundamental, they don't really capture the interactions between the supply and demand side on a platform. I believe that to truly understand a marketplace and to be able to improve its performance it's worth going one level deeper by trying to measure the liquidity of a platform and its key drivers. In this post, I hope to provide entrepreneurs with some of the tools to do this. This includes some key ratios such as Search To Fill Rate, Utilization Rate, Time To Fill, and Buyer to Supplier Ratio.

Let's start by defining liquidity as *the probability of selling something you list or of finding something you are looking for* ([James Currier, NFX](#)). Now the question is how do we go about measuring and eventually improving this probability?

Given that most marketplaces are two-sided, an accurate representation of liquidity should usually capture both buyer liquidity and supplier liquidity.

Buyer Liquidity

Buyer liquidity represents the likelihood that a request or a search leads to a transaction.

- For Amazon or Ebay, this could be the percentage of search sessions over a given month that result in a purchase.
- For Hired or Upwork, it could be the percentage of job postings within a certain period that result in a candidate getting hired.
- For Uber, this could be the percentage of requests per week that result in rides.

We can call this metric the *Search to Fill Rate*.

Supplier Liquidity

Supplier liquidity is best captured by measuring the *Utilization Rate* of the supply side.

- For Amazon's marketplaces or Ebay, this could be the percentage of stock at the beginning of the month that is sold at the end of the month.
- For Airbnb, this could be proportion of rooms booked every night.
- For Uber, this could be the proportion of drivers that are full-timers e.g. working more than 40 hours per week.

So as to get an accurate picture of liquidity, marketplaces should measure both search to fill and utilization on a granular per category and per geo basis and, in some cases, per time interval. This is because liquidity may look very different across different segments.

Depending on the type of marketplace you are operating, liquidity will also vary significantly. This will also impact which metrics one should focus on.

Three Types of Marketplaces

Most marketplaces fall into one of three categories (as defined by Josh Breinlinger):

Double-commit marketplaces (e.g Upwork, Hired, Care.com, Koru Kids)

- These marketplaces require the buyers and sellers to both commit to a transaction.

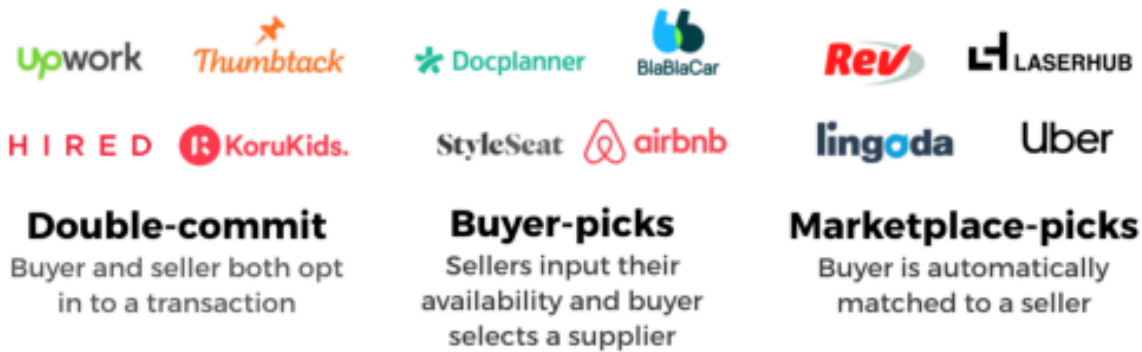
Buyer-picks marketplaces (e.g Airbnb, StyleSeat, Docplanner)

- These marketplaces require suppliers to enter their availability and the type of products or services they offer onto the platform. The buyers then commit to a transaction.

Marketplace-picks marketplaces (e.g. Uber, Rev, Lingoda)

- In these cases, the buyers request a service and are automatically matched to the suppliers.

Types of Marketplaces



Double-commit marketplaces tend to have the lowest liquidity since substantial time and effort is required from both sides (searching for the supply, chatting on the platform, negotiation a price) resulting in lower conversion rates. For these types of marketplaces, the number one priority should be to streamline the transaction experience as much as possible so as to increase the search to fill. The advantage of these marketplaces is that they usually allow custom needs to be fulfilled since buyers and sellers communicate prior to the transaction.

Buyer-picks marketplaces remove some of the friction involved in the double-commit model by allowing buyers to book a service or make a purchase without having to interact with the supply side. As a result, they tend to have a higher search to fill rate. Airbnb shifted from double-commit to a buyer-pick model for precisely this reason.

For buyer-picks marketplaces to work, the supply side must input additional data (availability and types of products or services offered) so that a buyer can instantly transact on the platform. For these types of marketplaces, understanding the utilization rate of your supply is vital. Suppliers that have lower utilization rates are most likely to move off-platform and, given that the platform does not act as their main source of income, they will generally care less about reviews and the quality of the service they provide. By contrast, suppliers that have a high utilization rate and that generate most of their income through the platform will be more motivated to help it succeed, more likely to offer good service and are less likely to churn.

In order to capture this dynamic, marketplaces need a metric to indicate what proportion of their suppliers are heavy users or rely on it as a primary source of salary. For instance, one could calculate the percentage of suppliers earning more than €1,000 per month or, in the case of service-based marketplaces, the percentage of suppliers working more than 30 hours per week via the platform.

Marketplace-picks marketplaces tend to have the highest fill rate since the buyer is automatically matched to the supplier resulting in a friction-free experience. Unlike double-commit marketplace which tend to have a more varied and potentially customisable supply-side offering, marketplace-picks models only work if there is a high degree of standardisation on the supply side. Since these marketplaces take on the responsibility of matching both sides, focusing on the quality and consistency of the service will be key as any poor results will be blamed on the platform as opposed to the supplier. For these marketplaces, measuring quality (via customer ratings and NPS) and speed of service, if relevant, is crucial. For Uber, for instance, the average time to pick up will be a crucial metric to measure, similarly to Deliveroo. We can call this metric *Time to Fill*. Like search to fill, it should be measured on a per geo and per category or per time slot basis.

Whilst marketplace-picks marketplaces generally have better liquidity, they often have weaker network effects. Since the supply is standardised, getting to sufficient supply scale tends to be easier resulting in lower barriers to entry and more competition. Take ridesharing, for instance, Uber's benefit from growing supply diminishes once time to fill drops below 3–5 minutes. As a result, marketplace-picks models tend to have a number of players in each market, rather than winner takes all.

Buyer to Supplier Ratio

Another metric worth measuring is the optimal *Buyer to Supplier Ratio*. This represents the number of buyers that one supplier can serve within a given time frame. It can be measured as the Transactions Per Buyer divided by the Transactions Per Seller over a given period of time.

For example, Uber drivers give on average six rides per day whilst a customer takes on average one ride every eight days. This suggests that one Uber driver should be able to service forty eight customers, the optimal Buyer to Supplier ratio is approximately 1:50. By contrast, marketplaces such as Opendoor, focused on real estate, are likely to have a

much lower buyer to seller ratio, potentially as low as 1:1. Understanding the optimal buyer to supplier ratio can help marketplaces keep the balance between both sides of the marketplaces and make better decisions when it comes to choosing which side they should focus on scaling.

This metric is particularly important for double-commit marketplaces with a high degree of standardisation or marketplaces where one supplier can only serve one buyer within a given time frame. By contrast, it is less relevant for listings marketplaces (e.g. Etsy) where one supplier can serve multiple buyers at any given time or marketplaces or marketplaces which offer a non-standardised product or service, where the emphasis should be on diversity of supply as opposed to quantity.

What I've described above are just a few suggestions for how to go about measuring marketplace liquidity. I've summarised the key metrics in the table below and hope they will prove useful for entrepreneurs that are in the process of setting up a marketplace or already running one :) If you have any examples or ideas for how you go about measuring the interaction between your demand side and supply side, please comment below!

Liquidity Metrics

Metrics	Definition	Example
Search To Fill	Percentage of searches or requests that lead to a transaction	<ul style="list-style-type: none"> * Amazon or Airbnb: % of searches that result in transactions * Thumbtack or Hired: % of job postings that result in a candidate getting hired * Uber: % of requests that result in transactions
Supplier Utilization	Percentage of suppliers that are heavy users	<ul style="list-style-type: none"> * % of suppliers earning more than €1,000 per month * % of suppliers working more than 30 hours per week
Time to Fill	Speed of service	<ul style="list-style-type: none"> * Uber: average time to pick up * Deliver: average time to delivery
Optimal Buyer to Supplier Ratio	The number of buyers that a given supplier can serve within a specific time frame	<ul style="list-style-type: none"> * Transactions Per Buyer/Transactions per Supplier within x number of weeks



Inspiration from this post came from numerous conversations with marketplace entrepreneurs as well as some awesome marketplace posts from the likes of [Josh Breinlinger](#), [James Currier](#), [Anand Iyer](#) and [Fabrice Grinda](#). Thanks a lot to [Lottie Liebling](#), [Li Jin](#) and [Arne Halleraker](#) for the feedback!

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