Table of Contents

3  Introduction
   by D'Arcy Coolican and Brandon Barros

7  Analysis: Key Takeaways From the Marketplace 100
   by D'Arcy Coolican and Brandon Barros

19  How the Marketplace 100 Is Ranked

22  13 Metrics for Marketplace Companies
   by Jeff Jordan, Andrew Chen, D'Arcy Coolican, Li Jin

30  Marketplace Glossary
   by Li Jin

36  Required Reading for Marketplace Entrepreneurs
   by a16z editorial

40  Appendix

41  Disclosures

42  Authors
Introduction

by D’Arcy Coolican and Brandon Barros
Last February, we introduced the a16z Marketplace 100, a ranking of the largest consumer-facing marketplace startups and private companies. The series was a hit, spurring debate about the evolution of marketplaces and promising new consumer categories.

Then COVID turned into a pandemic.

The past year has been a gut-punch for many marketplace categories. Ticketing marketplaces found their businesses drastically diminished when events were cancelled around the world. As schools were shuttered and many businesses enacted work from home policies, childcare marketplaces scrambled to adopt new safety precautions and stay afloat. Even the number #1 marketplace last year, Airbnb, grappled with shutdowns, cancellations, and refunds.

As 2020 drew to a close, however, many marketplaces proved to be extraordinarily resilient—a testament to the flexibility of the model. In a year when in-person interactions were heavily restricted and unemployment went through the roof, marketplaces allowed people to access the products and services they needed and, in many cases, monetize their own talents, services, and resources. From food and alcohol delivery to games, online education to outdoor getaways, marketplaces like Instacart, Valve, Outschool, and Hipcamp helped us weather a difficult year.

But while it’s tempting to view the data through the lens of COVID, as a firm we’re obsessively focused on the future: What’s new and intriguing? Which categories are growing fastest? What’s next? This year’s ranking features more than two dozen newcomers—including marketplaces devoted to thrifting, dogs, and cannabis—that not only survived the pandemic, but thrived.

The Top Consumer Marketplaces

The second edition of the Marketplace 100 offers a new perspective. The ranking is revealing not only in uncovering the top companies and categories of an unprecedented year, but also in showcasing certain startups’ consistency since 2019. You’ll see that data indicated by the rank change from last year.

Here are the highlights from the second edition of the Marketplace 100, which we’ll unpack in detail below:

- Marketplace GMV is highly concentrated. In last year’s ranking, four startups accounted for 76 percent of consumer spend. This year, however, more than 70 percent of the Marketplace 100’s total GMV can be attributed to just one company.
- Edtech accelerates. The biggest leap from last year’s ranking was in online education. One edtech company, Outschool, jumped 59 spots in a single year.
- It’s a battle to break out. Beyond the top 3 marketplaces in the Marketplace 100, the competition is tight: the difference in GMV among adjacent companies #4-100 is less than a half a percentage point. There’s likely to be movement in the ranks as startups vie for consumers’ dollars this year.
- The COVID effect is clear. Some newcomers to the list were surprising—including startups centered around travel and fashion—but indicate emerging trends in the way we shop and escape.
- Categories to watch: pets, cannabis, and collectibles. Changing consumer behavior (as well as pandemic fatigue) is evident in the data.
Methodology

A marketplace is any platform that connects buyers and sellers of goods/services with each other and facilitates a transaction.

Marketplace Categorization
When the vertical-specific subset of a larger category accounts for more than a third of the overall category’s GMV, it is broken out into a separate category. For example, “streetwear” and “fashion” are subsets independent from “shopping” because they each account for at least one-third of all GMV in the greater category.

Data Source
Bloomberg Second Measure, a company that analyzes billions of anonymized, aggregated credit, debit, and ACH transactions to track real-time consumer behavior and relative sales across 5,200 public and private merchants. The Marketplace 100 is drawn from companies on Bloomberg Second Measure’s coverage list. Please see the detailed list of data caveats and exclusions below.

Timeline
Observed sales are calculated over dates spanning January 2020 to December 2020. Year-over-year growth rates are counted as sales between January 2020 through December 2020 vs. January 2019 through December 2019. Companies that launched after January 2019 are labeled as such.

Refer to the complete methodology on page 40.
Analysis: Key Takeaways From the Marketplace 100

by D’Arcy Coolican and Brandon Barros
2019 to 2021: The Freshmen, Graduates, and Dropouts

There was a significant amount of change in the Marketplace 100 ranks this year. Twenty-five “freshmen” companies broke into the Marketplace 100 for the first time. Ten companies that graced last year’s Marketplace 100 have “graduated,” meaning they’ve been acquired or filed for an IPO. And 10 companies featured in last year’s ranking last dropped out of the top 100 this year. Many others continued to climb the charts over the course of 2020, experiencing growth even amid the pandemic.

In many ways, the Marketplace 100 reflects the imprint of a year like no other.

### Key takeaways from the Marketplace 100

1. The Marketplace 100 newcomers reveal emerging trends in outdoor travel, hyper-local food, and secondhand fashion.

There were 25 new entrants to the Marketplace 100 this year, including the social shopping app Depop (#46), local grocery delivery apps Mercato (#34) and Dumpling (#43), and the secondhand furniture marketplace AptDeco (#78). While newcomers represent only 1 percent of the ranking’s total GMV, they provide a glimpse into emerging categories.
Of the companies new to the Marketplace 100, nearly half fell into four categories: food and beverage, travel, music, and fashion. Collectively, these categories represented more than 70 percent of the freshmen GMV—Bandcamp, the indie music marketplace, and Mercato, an online grocery marketplace focused on local merchants, were the highest ranking new entrants. Some of these shifts reflect the fallout from COVID: how we eat “out” and shop has changed dramatically over the past 12 months.

Similarly, a number of Marketplace 100 freshmen center around travel—but not as we once knew it. Rather than focusing on flights or traditional tours and hotels, rising travel marketplaces are leaning into outdoor travel. The Marketplace 100 freshmen include a marketplace to book unique camp sites (Tentrr), to travel in and park RVs (Harvest Hosts), and to discover “luxury” camping experiences (Glamping Hub). Those freshmen joined repeat Marketplace 100 companies like the camping marketplace Hipcamp (which shot from #73 on last year’s list to #40) and RV rental companies Outdoorsy (which climbed from #28 to #11) and RVshare (from #35 to #14).

The year also ushered in a wave of new fashion marketplaces, including Curtsy, Depop, and Vestiaire Collective. As opposed to focusing on top brands and luxury labels (like the RealReal or Poshmark), the freshmen fashion marketplaces specialize in unique, pre-owned items. The market for online thrifting continues to grow; it’s quickly becoming a stand-alone category to be reckoned with.
And though the pets category had just one new entrant—the dog adoption marketplace Good Dog (#80), which joins repeat Marketplace 100 contenders Rover (#5) and Wag (#37)—the addition appears to be a harbinger of things to come. Pets have become an increasingly important part of people’s lives and budgets, a trend that accelerated over 2020. More than 12 million households took in pets in between March and December last year—dubbed “pandemic puppies”—and adoption rates multiplied.

Lastly, Whatnot, a live shopping marketplace focused on collectibles, edged its way into the ranking at #99. Though the startup only launched in December 2019, the company has since generated impressive growth (more on that below). In many ways, the collectibles space feels reminiscent of streetwear a few years ago, in the early days of GOAT (#6) and StockX (#4). (And now, via the rise of NFTs, anyone can monetize their art or media.) These companies offer a unique shopping experience—streamed live (Whatnot) or authenticated (GOAT, StockX)—to a niche category with passionate users. That combination has fueled jaw-dropping growth. Collectibles is a category to watch this year.

2. Within the marketplace ecosystem, consumer spending is concentrated at the very top.

Ten of the biggest marketplaces “graduated” from last year’s ranking when they went public or were acquired in 2020. Airbnb, DoorDash, Poshmark—three of the most prominent IPOs—represented over $150 billion combined in market cap at the end of their first day of trading. Postmates and Drizly are evidence that delivery-focused companies became hot acquisition targets this year.

Last year, we noted that the top marketplaces were big—really big. The graduates reinforce the idea that a handful of companies represent the bulk of the value. Through only 10 percent of the companies in last year’s Marketplace 100 went public or were acquired, those companies represented an astounding 57 percent of the ranking’s GMV last year. From a dollars perspective, that is a monumental amount of turnover.

Companies on Last Year’s Marketplace 100 That Went Public or Were Acquired

Graduates and Non-Graduates by 2020 GMV

Ranking by U.S. debit and credit sales. See full methodology and exclusions below.
One of the most striking results from this year’s ranking is Instacart’s impressive edge. The online grocery delivery and pick-up provider accounts for more than 70 percent of GMV in the Marketplace 100. (For context, last year’s #1 marketplace, Airbnb, represented just over 30 percent of total GMV.) And despite Instacart’s enormous scale, it was the fifteenth fastest growing marketplace of 2020, as well.

There’s intense competition among the ranks of the Marketplace 100. Beyond the top three marketplaces on the list, no company accounts for more than 1.5 percent of consumer spend, and no company is separated from its immediate neighbors by more than half a percentage point. That means there could be a fair amount of shuffling in the coming months, and it’s likely we’ll see a markedly different Marketplace 100 next year.

### Instacart Accounts for Over 70% of Observed GMV

- Instacart: 71.5%
- Valve: 8.3%
- Vacasa: 2.3%
- StockX: 1.5%
- Rover: 1.1%
- GOAT: 1.1%
- Other Companies: 14.2%

Ranking by U.S. debit and credit sales. See full methodology and exclusions below.

### 3. COVID crushed some marketplace categories...

Just as pandemic behavior catapulted a number of categories and companies into the ranking, the accompanying fears and necessary safety restrictions hindered others. In particular, childcare marketplaces shunk 61 percent, ticketing marketplaces by 52 percent, and office space marketplaces by 30 percent.

### 4 ...and supercharged others, including online education, celebrity engagement, grocery delivery, and wholesale

There was considerable movement up the ranks by repeat Marketplace 100 companies. The biggest leaps came from the remote learning marketplace...
Outschool, the celebrity engagement platform Cameo, the campspace connector Hipcamp, and the wholesale retail marketplace Faire. These companies have something in common: they’re all fast-growing marketplaces in a “niche” category that was supercharged by pandemic behavior.

Biggest Movers in a16z Marketplace 100

<table>
<thead>
<tr>
<th>Company</th>
<th>Current Rank</th>
<th>YoY Rank Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outschool</td>
<td>10</td>
<td>+59</td>
</tr>
<tr>
<td>Cameo</td>
<td>31</td>
<td>+36</td>
</tr>
<tr>
<td>Faire</td>
<td>18</td>
<td>+35</td>
</tr>
<tr>
<td>Hipcamp</td>
<td>40</td>
<td>+33</td>
</tr>
</tbody>
</table>

On average, the standouts rose 41 spots in the Marketplace 100 ranking over the past year. Prior to 2020, the market size for these emerging companies was somewhat uncertain; the past year has revealed not only the enormity of the opportunity, but the strength of those companies’ product-market fit.

When it comes to the success of business ideas—especially in tech—**timing is critically important**. The past year forced many marketplace companies to completely rethink their business models. Against all odds, a few lucky categories were in a position to grow.

The Fastest-Growing Marketplace Categories

Ranking by U.S. debit and credit sales. See full methodology and exclusions below.
Several categories doubled year-over-year, experiencing 100 percent growth or more. **Cameo** spurred celebrity engagement, while the grocery category was fueled not only by Instacart, but also **Mercato** and **Dumpling**. **Faire**, a wholesale marketplace that allows boutique retailers to find and purchase merchandise from indie brands, single-handedly made wholesale the fastest growing category in last year’s ranking; this year, it jumped 35 spots. Music marketplaces also saw impressive growth, propelled primarily by **Bandcamp**.

In addition, the education category grew 77 percent, driven by companies like **Outschool** and **MasterClass**. Despite the obvious challenges presented by COVID restrictions and lockdowns, the travel category also saw impressive growth. This is due in large part to the contributions of companies that provide “socially distanced” travel options, such as RV rentals and remote camping experiences, like Hipcamp, Outdoorsy, RVshare, and Harvest Hosts.

5. As the year progressed, we changed our spending habits on food, furniture, even cannabis delivery.

The year started out looking relatively normal: we purchased tickets for concerts and sporting events, we went to the gym and group fitness classes, we spent money on childcare and dog-walkers. Then, as COVID spread into a pandemic, marketplaces helped us stock up and stay home—at least at first.

- In the winter we were still in the “old normal” where we spent on things like childcare and tickets. In fact over 70 percent of the total 2020 spend in both of those categories was in Q1 alone.

- In the spring, as shelter-in-place went into effect, people leaned on technology to stay entertained, connected, and relaxed: celebrity engagement (in the form of Cameo videos) grew ~250 percent from its Q1 mark, while flower delivery went up nearly 200 percent from Q1. While both those hit their high-water marks in Q2, cannabis delivery shot up over 400 percent in Q2, and stayed there the rest of the year.

- As summer rolled around, consumer consumers were either settling in or relocating entirely. Moving services like Dolly were up 200 percent and furniture marketplaces like AptDeco were up nearly 100 percent, compared to Q1. Meanwhile, people stuck at home revived the collectibles craze: that category shot up over 400 percent, relative to Q1.

- And as the year came to a close, shopping started to make a comeback. Live shopping for collectibles maintained its momentum, and we saw increased spending on wholesale items (+350 percent vs Q1) and streetwear (+125 percent vs Q1), as well.
Ranking by U.S. debit and credit sales. See full methodology and exclusions below.
6. Network effects are no joke. And for companies without them, competition is fierce.

The power of network effects in marketplace businesses is evident in the data. In “open” categories—that is, those without a strong incumbent, like furniture or music—newcomers like AptDeco, Eaze, and Bandcamp were able to achieve growth. Meanwhile, in categories that are dominated by a large established marketplace, much of the category’s growth was attributed to incumbents, rather than newcomers.
Ranking by U.S. debit and credit sales. See full methodology and exclusions below.

7. The five fastest-growing startups are growing **really** fast—more than 10x, year-over-year.

*Launched in December 2019
**Launched in July 2019

Ranking by U.S. debit and credit sales. See full methodology and exclusions below.
The fastest-growing startups reveal emergent consumer categories. **Whatnot** (#99), a community-driven marketplace for buying and selling collectibles, was the fastest growing marketplace in 2020 (caveat: It launched in December 2019, so its window for 2019 GMV is shorter than others on the ranking). Whatnot's expansion highlights two emerging trends: collectibles and live shopping. Collectibles might seem niche in isolation, but when you combine the category with interactive video, it makes shopping feel magical. Look for live shopping—aka shopertainment—to grow.

**Good Dog** (#80), a marketplace that connects aspiring dog owners with vetted, certified breeders and shelters, was the next fastest growing marketplace in 2020. Not only did pets become even more important this isolating year, but the pandemic normalized shopping for pets online.

**Mercato** (#34) and **Dumpling** (#43) both connect consumers with local grocery providers. Though online grocery shopping at large went mainstream this year, companies that combine local merchants and convenient delivery hit a sweet spot in customer demand.

The rapid growth of the remote learning marketplace **Outschool** (#10) over 2020 was likely a product of widespread school closures. But the company’s recent rise also could signal increasing adoption of home-schooling and online education.

### 8. Growth and scale were possible in 2020

We’ve previously described the marketplace “mountain”—the idea that it’s difficult to maintain high levels of growth at high levels of GMV. This year’s Marketplace 100 challenged that conceit. A select few companies managed to pull off the improbable: reaching the top 25 in terms of GMV and growth.

Instacart, Faire, Viagogo, Outschool, and MasterClass were largely at scale in the lead-up to the pandemic; 2020 managed to vault them forward years. All achieved impressive growth rates and scale, simultaneously. This rarity occurs when a marketplace with clear network effects meets a shock of demand.

In the Marketplace 100, five of the top 10 fastest growing marketplaces also broke into the top 50 in terms of GMV: Mercato, Dumpling, Depop, Outschool, and Hipcamp.
The past year had the potential to be a very tough year for marketplace companies, as it was for many industries. Instead, the Marketplace 100 is evidence of many startups’ impressive stamina, adaptability, and, more often than not, growth.

From food delivery to edtech, music, and camping, the companies on the ranking represent the activities that helped us make it through a tough year. The pandemic fundamentally altered how we travel, learn, and shop—and marketplace companies innovated to serve those needs.

Marketplaces companies will continue to play a key role as the economy recovers. We’re excited to see what the year ahead holds, and we’re intrigued to see how post-pandemic behavior might shake up next year’s Marketplace 100.
How the Marketplace 100 Is Ranked
Once again, we turned to the data to help us analyze the state of the marketplace ecosystem: specifically, anonymized, aggregated U.S. consumer spending data captured via credit cards, debit cards, and bank transfers. The Marketplace 100 is based on data from Bloomberg Second Measure, a consumer data analytics company that analyzes billions of purchases to track real-time consumer behavior and relative sales across over 5,200 merchants. This information allows us to assess which marketplaces are capturing the most dollars, what’s trending up and down, and which categories are growing the fastest.

The startups and private companies on the Marketplace 100 are then ranked using a common industry metric, Gross Merchandise Value (GMV), which is extrapolated from the total dollars consumers are spending against each company. This provides an approximate measure of a marketplace’s scale and its importance in the economy, based on how much revenue is trading hands between buyers and sellers.

Of course, there are many caveats and limitations to this approach: Notably, it leaves out most B2B marketplaces (though there are many we’re excited about), and understates companies that might receive payments mostly via cash, check, or EBT. In addition, Bloomberg Second Measure’s transaction data is limited to the United States, which excludes many high-growth startups that do business internationally. Some companies that may meet the criteria of the Marketplace 100—including four companies that were included in last year’s ranking, Kaiyo, UpCounsel, Artsy, and Splacer—are no longer on Bloomberg Second Measure’s coverage list; likewise, some that were not covered by Bloomberg Second Measure’s coverage last year now are. Finally, some products are hybrids of marketplaces and other business models; in those cases, we’ve used our best judgement.

Methodology

A marketplace is any platform that connects buyers and sellers of goods/services with each other and facilitates a transaction.

Marketplace categorization

When the vertical-specific subset of a larger category accounts for more than a third of the overall category’s GMV, it is broken out into a separate category. For example, “streetwear” and “fashion” are subsets independent from “shopping” because they each account for at least one-third of all GMV in the greater category.

Data source

Bloomberg Second Measure, a company that analyzes billions of anonymized, aggregated credit, debit, and ACH transactions to track real-time consumer behavior and relative sales across 5,200 public and private
merchants. The Marketplace 100 is drawn from companies on Bloomberg Second Measure’s coverage list. Please see the detailed list of data caveats and exclusions below.

**Timeline**

Observed sales are calculated over dates spanning January 2020 to December 2020. Year-over-year growth rates are counted as sales between January 2020 through December 2020 vs. January 2019 through December 2019. Companies that launched after January 2019 are labeled as such.

- Bloomberg Second Measure data is made up of billions of anonymous U.S. consumers’ credit card, debit card, and bank transactions. It excludes non-U.S. consumers, business spending, receipt-level information, and payments made via cash, check, or EBT.
- Transactions correspond to some companies’ Gross Merchandise Volume, a significant portion of which is not revenue to the company.
- Bloomberg Second Measure cannot reliably attribute bundled revenue streams.
- Tips are not reliably differentiated from purchases on marketplaces and may be included in some merchants’ GMV.
- Bloomberg Second Measure does not observe revenue from third-party retailers or other B2B revenue streams.
- Bloomberg Second Measure does not observe spending made with gift cards.
- Bloomberg Second Measure cannot reliably attribute purchases financed through third-party companies like Prosper and Affirm to the marketplace associated with the purchase.
- Bloomberg Second Measure cannot reliably observe spending financed through credits from selling on a marketplace.
- Bloomberg Second Measure does not observe revenue from corporate benefits partnership programs.
- Bloomberg Second Measure does not observe online payments through iTunes or the Apple App Store.
- Bloomberg Second Measure cannot reliably observe marketplace fees.
- Bloomberg Second Measure does not observe marketplace revenue generated by third-party referrals.
- There may exist companies that meet the criteria of the Marketplace 100, but they are not included because they are not on Bloomberg Second Measure’s coverage list.
13 Metrics for Marketplace Companies

by Jeff Jordan, Andrew Chen, D’Arcy Coolican, Li Jin
Every company tracks certain success metrics—commonly accepted criteria for the health of a business. But when it comes to marketplaces, those measurements can often be imprecisely defined or muddled in their interpretation. Of course, as marketplaces vary widely in their product category and customer base, so do their benchmarks. But the following list serves as a primer for the key metrics marketplace founders should be aware of, both to calibrate their performance and evaluate future potential.

**Match rate (aka utilization rate or success rate)**

*How successfully can the two sides of the marketplace find each other?*

The job of any marketplace is to facilitate the matching of supply with demand. It’s therefore important to measure your successful “match rate” — the rate at which buyers can find sellers, and vice versa. How to define this metric depends on the unique business.

Match rates examples for particular businesses include:

- Driver utilization time for ridesharing — what % of the time are drivers driving around with a passenger, vs. empty?

- How often are employers actually filling their posted role in job marketplaces? And how often are job seekers finding jobs?

A related metric is to measure “zeros”, or unsuccessful matches. For ridesharing, what percentage of users open the app but don’t end up requesting a ride? Those “zeros” could be due to too long of a wait time, surge pricing, or something else — all instances the marketplace was unable to clear demand. Marketplace operators should identify reasons why matches don’t happen and take steps to remove or reduce these blockers through growing and incentivizing the more constrained side of the marketplace, improving product design, and other mechanisms.

This metric is also closely related to the concept of multi-tenanting described above. If match rate is low, then users will naturally be incentivized to go elsewhere and use other products. For instance, it’s common for employers to post their job listings on a variety of sites — their own website, LinkedIn, Indeed, as well as other networks — simply because no single network has a high enough match rate. If there’s even incremental revenue potential or even just minimum utility, multi-tenanting will take place; just think about all of the delivery marketplace stickers you see in any given restaurant’s window.
Market depth

Is there enough supply? Does it fit users’ needs?

The concept of “offer depth” or market depth originated from financial markets, where it’s defined as the market’s ability to sustain relatively large orders without price movements. The higher the number of buy and sell orders at each price, the greater the depth of the market.

For consumer marketplaces, it’s important to measure market depth because it directly impacts the user experience. For heterogeneous supply marketplaces (where each supplier is different), market depth determines whether users will be able to find a match. When users open products like OfferUp or Airbnb, how many listings will they see, and how likely will they be to find an item they want to buy or home they want to rent? For homogenous supply marketplaces, market depth impacts ease of use. When users open Lime, how many bikes/scooters will they see near them? The greater the market depth, the easier (and less user effort required, in terms of walking) it is to use Lime.

One of the primary jobs of any marketplace business is to reduce search costs — making it easy for participants to find and match with the other side. Failing to do this can result in a marketplace with negative network effects, where too much supply actually causes challenges in discovery. As consumers, we experience this as decision fatigue, or a paradox of choice. Conversion rates could fall in this scenario.

A note on heterogeneous vs. homogeneous supply: “homogeneous supply” marketplaces typically hit an asymptote in network effects, where the value to users eventually plateaus with greater market depth. For instance, if there were 6 Lime scooters on a city block near me, this is no more valuable than if there were only 4 or 5 scooters available for me to use in my vicinity — user value is unchanged despite the addition of more supply. On the other hand, for heterogeneous marketplaces, there is no asymptote because every node on the supply side is different and potentially can add greater value. In the Airbnb example, a user’s tastes may be quite specific, so every additional listing on the platform is useful to see.

Time to match (or inventory turnover, or days to turn)

How long does it take for supply and demand to match?

Typically, marketplaces have a curve for match rate: over a long timespan, a greater share of inventory clears. For product marketplaces, this is commonly referred to as inventory turnover.

The inverse is days to turn, and this metric is more applicable for more traditional marketplaces, where the matching happens via users opting in — one side creates a listing and the other responds — in contrast to on-demand marketplaces, which do matching in a centralized, algorithmic (and less visible to users) way.

For instance, for job marketplaces, how long does it take an employer to find an employee? How long does it take to receive the first application? For P2P marketplaces, how long does it take for each side to engage in a transaction? For Thumbtack, how long does it take users to receive the first quote? How long does it take on OfferUp for a seller to sell their product?
Concentration or fragmentation of supply and demand

**How concentrated is the marketplace on the supply and demand sides?**

Marketplaces where there is greater fragmentation on the supply and demand sides are more valuable and defensible. This means no participants on the demand or supply sides disproportionately account for a high share of transactions, which makes the business more sustainable and diversified. If demand or supply is too concentrated on a marketplace, there's risk that a large buyer or seller can take a large share of transactions with them if they decide to leave the platform.

There's also greater value when a marketplace aggregates fragmented goods or providers, as those would otherwise have been more difficult to discover and access. This is basically like taking the advantages of a long tail (more variety and niches) and making it as easy to find as the head of the tail (beyond just popular hits).

Marketplaces can gauge concentration by measuring the % of GMV the top X sellers or buyers account for (e.g. the share of GMV each grocery chain contributes, in the case of Instacart).

---

**Take rate**

**How valuable is the marketplace?**

In marketplace businesses, gross merchandise volume (GMV) and revenue are frequently used interchangeably. But GMV does not equal revenue.

Gross merchandise volume is the total sales dollar volume of merchandise transacting through the marketplace in a specific period. It's the real top line, what the consumer side of the marketplace is spending. It is a useful measure of the size of the marketplace and can be useful as a "current run rate" measure based on annualizing the most recent month or quarter.

Revenue is the portion of GMV that the marketplace "takes." Revenue consists of the various fees that the marketplace gets for providing its services; most typically these are transaction fees based on GMV successfully transacted on the marketplace, but can also include ad revenue, sponsorships, etc. These fees are usually a fraction of GMV.

The take rate suggests the value of the marketplace itself.

---

**Unit economics**

**How is the business doing?**

Improved network effects often appear in improved unit economics over time. This is a result of declining incentives that businesses need to offer to different sides of the market, lower share of paid users, and overall improvement in pricing power.

For businesses with local network effects, the impact of network effects should show up in unit economics over time, on a market-by-market basis. This is because in a given market, CAC should decrease and the organic share of users should grow over time. For businesses like Thumbtack or Instacart, which have network effects at the local level, tracking the
unit economics over time per market is helpful because you’ll see the relationship between market age, network density, and profitability.

Prevalence of multi-tenanting

How many of your users also use other similar services? How many users are active on similar services?

It’s important to understand whether your users are also using similar services, including related services where the functionality may not be exactly the same.

We’ve often observed that if a company is able to replicate a network, it can also layer on functionality that can obviate the need for another product. Even if it doesn’t wipe out the target company, such multi-tenanting can reduce usage and compress margins for all competitors. A marketplace for dog walkers and pet owners, for example, has the opportunity to move into pet health or food or other adjacent products, given it has built a network of pet owners from the core business. Facebook developed ephemeral Stories and added this feature into their various apps, including Instagram, in turn stymying the growth of Snapchat.

Measuring such multi-tenanting can be tricky—it might mean polling your users and asking whether they use another service; digging deeper into churn or declines in usage (and figuring out whether those users are moving to a different service); or simply brute-force searching for users’ profiles on other platforms! But once you see how many users are multi-tenanting, there are ways to shore up your product so users are less tempted to go somewhere else. In ride-sharing, for example (which had high multi-tenanting on both sides), companies rolled out subscriptions on the rider side and bonuses on the driver side to boost retention and reduce usage of competitors’ services.

Finally, even if you have a good sense of the overlap between your user base and that of another service’s, it’s important to consider how active your users are: are they merely maintaining a profile, or actively using your product?

Switching or multi-homing costs

How easy is it for users to join a new (or even nonexistent) network? How much value can users get as a new user from joining a different network?

Beyond the availability of substitutes, how easy is it for users of one network to sign up and complete the onboarding process for a competing network?

The friction involved in signing up and becoming an active user varies from product to product. Products that have an onboarding process that requires high upfront investment may find it challenging to activate prospective new users—but it also serves as a moat against competitors, because once those users are active, they’re less likely to multi-tenant. Looking at the landscape of online personal styling services, a Stitch Fix customer for instance may find it tedious to try out a different service because of the upfront investment in explaining her preferences to a new stylist; inputting information around her taste and sizing; calibrating various styles received and returned; and so on.
Conversely, if a product has a lower activation energy required of new users, it can more easily wedge its way into a market by getting users to multi-tenant and switch over. Because Uber already had millions’ of users’ credit card information for ride-sharing purposes, a user who was previously using another food delivery network could easily start using Uber Eats without much friction.

Another important consideration here is how much value can users get at the beginning when they join a new network — what’s the user experience with a cold start? For Facebook, even though users can easily join other social networks, their data, content, and networks are all on Facebook, so there’s high switching costs to inviting their network and rebuilding their social graph. On the other hand, for job listing marketplaces, an employer can easily upload their hiring specs to multiple sites and start receiving candidate applications from the get-go.

Distilling switching or multi-homing costs into a quantifiable metric can be tricky, and any metric will be quite specific to that exact business and market. Potential metrics could be the time required to complete a competitor’s onboarding flow; or the ease of getting to the minimum threshold or “magic number” for a product to be useful (e.g. 10 friends for Facebook); and so on.

**User retention cohorts**

Is your user retention improving for newer cohorts?

The classic definition of a network effect is that the value of a product or service to a user increases with the number of other users using the same product or service. This increase in user value should therefore be reflected in user retention cohorts: newer cohorts (who experience a product when the network is larger and more useful) should have better retention for any given time period than older cohorts that joined when the network was smaller.

However, theory often differs from reality here, and we often see businesses that have declining cohort retention over time. This is because a major confounding factor to consider when evaluating user retention is that the oldest user cohorts — especially for social network/community-based products — tend to be early adopters who are the most “ideal customers” for a product/service. Those early, often highly motivated users naturally translate into better retention cohorts for the oldest customers, rather than the newest.

Other circumstances can also change the analysis of this metric: the presence of a competitor; network effects that are hyperlocal and thus “reset” for new users in every new geography; or even negative network effects, where value to users actually decreases at a certain threshold (perhaps due to crowding or contaminants in the network).

**Core action retention cohorts**

Is retention, as defined by users taking a core action for the product, improving for newer cohorts?

Digging deeper into the engagement funnel, you want to see if more users are taking the “core action” of your product. The core action can be one
that actually corresponds to users deriving value from your product, and/or something that maps closely to your business model.

For instance, if the core action of OpenTable is users booking a restaurant, then as the network density grows, they should expect to see improving retention as anchored on this core action. This core action retention is more telling of network effects than just measuring top-level logins or app opens.

Dollar retention and paid user retention cohorts

Are newer cohorts retaining better on a dollar basis, for every given time period, than older cohorts?

Subscription and paid products need to pay attention to dollar retention and paid user retention. New user cohorts should be better retained — in terms of cohort revenue — than older cohorts. Why? Because paying for a product indicates how much users value that product, a product with network effects — which becomes more valuable over time — should have increasing dollar retention and paid user retention among newer cohorts.

For instance, as the network coverage of Angie’s List — a home services directory — improves, we’d expect to see that new user subscriber cohorts are better retained, both in terms of dollar retention as well as the number of users who remain subscribed, given the greater utility of the site.

Retention by location/geography

Are participants in the oldest markets—for businesses with local network effects—better retained than those in newer markets?

For local network effect businesses, the network effects exist on a per-market basis, and “resets” for new geographies. For Care.com users in Charlotte, for example, the presence of more babysitters available in New York City doesn’t impact the user experience; but having more babysitters available locally does improve the usefulness of the network there.

As each geography matures and builds network density, retention should improve in those markets. Thus, the oldest or most established markets tend to have better retention than newer markets. We see this in practice in data shared by almost every local network effect business.

Power user curves

Are users becoming more engaged over time?

Power users drive some of the most successful companies, by contributing a ton of value to the network. While DAU/MAU — dividing daily active users by monthly active users — is a common metric for measuring engagement, it has its shortcomings, and power user curves provide a more nuanced way to understand user engagement.

In short, power user curves (commonly called L30 charts for 30 days of use, or L7 charts for 7 days of use) are histograms of users’ engagement, showing the total number of days users were active in doing a particular action in a given timeframe. In analyzing network effect businesses, seeing how often users take a specific action on a cohort basis allows you to see whether a product
is really gaining utility with more users — aka the network effect. If a product is indeed more valuable with more users, then that should be reflected in a growing share of users shifting to higher-frequency engagement buckets or an increasingly right-leaning power user curve over time.
Marketplace Glossary

by Li Jin
From a business standpoint, we know marketplaces are challenging to scale; from a conversational perspective, we’ve come to realize they’re also really hard to explain. A dizzying array of jargon is used to describe the dynamics of such companies, which can make marketplace-focused posts and podcasts feel cryptic and inaccessible. Such terminology exists because there are many subtleties to managing a marketplace business, as evidenced by the Marketplace 100. The marketplace glossary is intended to demystify buzzwords for founders, operators, and tech-savvy readers alike.

Basic Marketplace Terms

**Marketplace**
Though the semantics have been vigorously debated, we define a marketplace as any platform that connects the buyers and sellers of goods or services with each other and provides infrastructure (such as reviews, payments, or messaging) to facilitate a transaction.

This definition becomes more complicated when marketplaces hold inventory (like Amazon) or employ providers (like Honor). See: managed marketplace, below.

**Supply side and demand side**
The supply-side provides the product or service; the demand-side acquires the product or service. In a marketplace, this usually occurs via a financial exchange from demand to supply.

In our experience, it’s typically easier to jumpstart supply than demand because suppliers are economically motivated. The harder part of scaling a marketplace is figuring out how to aggregate demand. (There’s a wealth of resources and advice on solving this chicken-and-egg problem.)

**Liquidity**
The ease with which buyers and sellers can find the right counterpart in the marketplace. In other words, liquidity is the likelihood that a seller is able to find a buyer, or that a buyer is able to find the product or service they’re looking for.

Liquidity is the most critical aspect of a marketplace; without it, a marketplace isn’t valuable to buyers and sellers. Most marketplaces fail because they never reach or maintain liquidity. Liquidity can be measured through metrics like fill rate (aka match rate, utilization rate), market depth, and time to find a match.

**Network effects**
The phenomenon in which a product/service becomes more valuable as its user base grows. Here’s our primer on network effects.
Two-sided network effects
Marketplaces have a 2-sided network effect, wherein the network becomes more valuable as the number of users on the other side of the marketplace increases. For instance, in a rideshare marketplace, users derive more value when there are more drivers, and vice versa. Different marketplaces have varying levels of network effects strength. (Check out our blog post on measuring network effects here.)

Search costs (aka search friction)
The time, effort, and money consumers spend to search for the best product or service. In a marketplace, higher search costs create decision fatigue for consumers, as well as lower liquidity. Marketplaces can implement various features to reduce search costs, including curating or constraining supply or automating matching.

Matching
The process by which suppliers and consumers find each other. Some marketplaces (such as Uber and Lyft) automate matching to drive liquidity. Others seek to reduce search costs by constraining the available choices—say, dating apps that select and surface a set number of potential matches per day.

There are various ways that marketplaces architect matching:

- **Supply-pick** – The suppliers decide which customers to transact with. Uber and Lyft are examples of supply-pick marketplaces: the driver is presented with a passenger and has the option to opt in or out of the ride.

- **Demand-pick** – Customers decide which product or service to buy. Examples are Airbnb for “Instant Book” listings, in which the booking doesn’t require host approval. Most ecommerce marketplaces are demand-pick.

- **Double commit** – Suppliers and customers need to opt-in for a match to occur. Craigslist, for instance, is a double opt-in marketplace because users need to message back and forth in order to complete a transaction. Airbnb for non-Instant Book listings is a double opt-in marketplace. Double-commit marketplaces tend to have the lowest liquidity, since effort is required from both sides to match.

- **Prescribed pairing** – The platform prescribes a match, potentially taking into account the preferences and attributes of each side. Lunchclub is an example of a platform that prescribes matches—users seeking to expand their professional network opt in to a weekly meeting and are automatically paired with another user in the network.

Take rate (aka rake)
Take rate is the percentage of the gross merchandise value (GMV) captured by the marketplace. It usually varies from a low single-digit percent to the mid-30s, depending on factors like fragmentation, availability of substitutes, and operational value-add provided by the marketplace. Managed marketplaces typically have a higher take rate because they provide more value to users and cover operational expenses.
Types of Marketplaces

**Managed marketplace**
Marketplaces that take on additional activities in order to better establish trust, especially in high-value or high-stakes categories. These functions can include verifying product authenticity, providing pricing guidance, and interviewing and vetting providers to ensure quality—in some cases, even employing providers.

Managed marketplaces represent an important evolution in marketplace design and can unlock categories that are high-trust and/or -value, such as luxury goods or real estate. On the flip side, managed marketplaces represent greater operational overhead and can be challenging to build into a profitable business.

**Vertical marketplace**
A marketplace that is hyper-targeted to the needs of a particular industry, product category, or other group of customers with specific needs. Vertical marketplaces are often contrasted with horizontal marketplaces: Craigslist is a horizontal marketplace, while Angie’s List (which is focused on home services) and Trusted (which targets babysitting) are examples of vertical marketplaces. There are various degrees of verticalization: for instance, Slice, an online food ordering platform for independent pizzerias, is a more verticalized form of Uber Eats.

Vertical marketplaces can offer an experience that is tailored to the unique needs of a particular group of users.

**Multi-sided marketplace**
Aside from two-sided marketplaces, there are also N-sided marketplaces. Food delivery marketplaces are a common example of three-sided marketplaces, in that they are comprised of restaurants, delivery drivers, and consumers.

Multi-sided marketplaces are often harder to get off the ground because they need to acquire and retain additional sides of the marketplace. However, as a result they are also more defensible.

**Local vs. global marketplaces (or local vs. global network effects)**
The geographic scope wherein the marketplace has network effects. Global marketplaces have global network effects: an additional supply around the world creates additional value for a user in a different country. Local marketplaces are ones in which an additional user is only relevant and valuable to other users in that particular geography—i.e., they have local network effects.

**B2B, B2C, and P2P (aka C2C) marketplaces**
These terms describe the supply and demand users in the marketplace: businesses or consumers. A B2B marketplace matches businesses with businesses, such as Faire (a wholesale marketplace connecting retailers to brands), while B2C marketplaces connect businesses to consumers (like, say, DoorDash). P2P, or peer-to-peer, marketplaces have individual consumers on both sides, such as Airbnb.

This distinction can get more complicated as the line between business and consumer blurs. A professional Airbnb host, for instance, may be a “B” (business) or a “C” (consumer). At a high level, describing a marketplace as
one of these categories helps to convey the dynamics of acquiring different sides of the marketplace. B2B marketplaces are typically constrained by sales, while P2P marketplaces are constrained by trust, general awareness, and category creation.

## Market Structure

### Fragmentation and Concentration
Marketplace fragmentation and concentration refers to the degree to which the volume in the marketplace is made up of a smaller number of players (concentrated) or large number of players (fragmented).

Typically, fragmentation is desirable. The risk of a highly-concentrated marketplace is that an individual buyer or seller can exert outsize influence over the marketplace in terms of pricing, gross merchandise value (GMV), etc.

### Homogeneity vs. Heterogeneity
The degree to which there is variety among supply in a marketplace. A company can design a marketplace to increase or decrease homogeneity as a product choice. For instance, Uber buckets the drivers available into a small number of tiers in order to reduce search costs. Other marketplaces surface heterogeneity among suppliers: for example, Outschool—a live online children’s education platform—highlights the unique attributes of each course and teacher.

### Commoditization
(verb: to commoditize)
Relatedly, commoditization is the degree to which the marketplace diminishes the variation between suppliers. Commoditized goods and services are relatively indistinguishable from the rival offerings of another supplier. Amazon, Facebook (with regards to media companies on the Newsfeed), and other aggregators are often described as commoditizing their suppliers, meaning every product is displayed in the same way, in a manner that detracts from brand differentiation.

To avoid overwhelming consumers with a deluge of options, every marketplace needs to commoditize its suppliers to some extent—that is, to standardize the infinite variation between products and services and to expose the relevant aspects for consumers.

## User Behavior

### Disintermediation (aka leakage)
This occurs when a platform’s supply-side and demand-side users utilize the marketplace for discovery, but then complete the transaction outside of the platform (e.g., finding and messaging a service provider on the marketplace, then transacting offline).

Disintermediation can be motivated by price sensitivity (users trying to bypass marketplace fees), convenience (for monogamous transactions, it can be convenient to move the transaction offline), or by necessity (marketplaces such as Craigslist, for example, may not provide the infrastructure needed to complete the transaction on-platform).
Disintermediation is undesirable for marketplaces because it stymies growth and suppresses monetization. A number of blog posts outline tactics to reduce and prevent disintermediation.

Managed marketplaces combat disintermediation because they offer greater value in facilitating the transaction.

**Multi-tenanting (aka multi-homing)**
When users (either demand or supply) use multiple platforms to list or search. For instance, an employer might post a job opening on multiple job search websites, or a host could list a property on multiple travel websites.

Multi-tenanting reduces the strength of the marketplace’s network effects.

**Monogamous vs. Polygamous**
These terms are used to describe the relationship between supply and demand. If transactions happen repeatedly between the same supply-side user and the same demand-side user, the transactions or relationship is described as monogamous in nature. Certain categories are also often described as monogamous—home cleaning or babysitting, for example—in which buyers typically prefer to work with the same provider repeatedly after establishing trust and familiarity. Other categories are more polygamous, meaning the user has repeated, different matching needs across transactions, such as travel accommodations or food delivery.

Polygamous transactions are better suited to marketplaces because users are compelled to return to the marketplace on an ongoing basis for future transactions. In contrast, monogamous categories heighten the risk of disintermediation.
Required Reading for Marketplace Entrepreneurs

by a16z editorial
From academics to analysts, startup founders to journalists, these 20 recently published pieces and books helped shape our thinking on the business dynamics, historical context, and future of marketplace companies.

**How to Kickstart and Scale a Marketplace Business**, lennyrachitsky.com
This mega-essay by Lenny Rachitsky, former supply growth lead at Airbnb, synthesizes insights from 17 marketplace businesses, including Doordash and Etsy. Topics include how to drive supply and demand, growth levers, and maintaining quality.

**Tales of a Marketplace Founder**, hackernoon.com
Pared co-founder Dave Lu argues that not all marketplaces are created equal—and outlines the dimensions that influence marketplace success.

**Platforms vs. Verticals and the Next Great Unbundling**, a16z.com
a16z’s Jeff Jordan (veteran marketplace operator and investor; former CEO of OpenTable and GM of eBay North America) and D’Arcy Coolican describe the opportunity to unbundle horizontal platforms into vertical marketplaces.

**What’s Next for Marketplace Startups: Services**, a16z.com
Li Jin and Andrew Chen of a16z trace the evolution of marketplace platforms, from listings to verticalized Craigslist models, “Uber for X” companies to managed marketplaces. The deck also explores the opportunities for consumers to discover and purchase services online.

**WTF Is Marketplace Liquidity?**, Point Nine Land (via medium.com)
For all the emphasis placed on liquidity, there are few resources that delve into how to measure it. Julia Morrongiello of Point Nine Capital cuts to the chase.

**An Important Marketplace Metric: Search to Fill**, medium.com
A failed Uber request inspired Trusted CEO Anand Iyer to write this deep dive into a critical (but often overlooked) metric: search to fill.

**Eight Things to Consider When Building Managed Marketplace Companies**, a16z.com
From licensing requirements to one’s Net Promoter Score, a16z partner Li Jin unspools eight factors to consider when building a managed marketplace in a regulated category.

**Making Markets**, hbs.edu
Marketplaces have two major camps of analysts: the business world and academia. In this paper, Harvard Business School professors Thomas Eisenmann and Scott Kominers provide a wonky overview of the causes of market failure. (Free PDF available here until 2/29.)
Super Pumped: The Battle for Uber
The cinematic tale of Uber’s origin and its founder, Travis Kalanick, as reported by the New York Times technology reporter Mike Isaac who covered Uber.

The Passion Economy and the Future of Work, a16z.com
The next wave of work opportunities will be in platforms that enable people to monetize their passions, predicts a16z’s Li Jin. Here’s how these marketplaces are treating individuality as a feature, not a bug.

Marketplaces and Network Effects, a16z.com
a16z’s Jeff Jordan shares what makes marketplace business models so attractive, especially compared to classic ecommerce and retail.

The Anatomy of a Marketplace, Noteworthy - The Journal Blog (via medium.com)
As the founder and former CEO of TaskRabbit, Leah Solivan is intimately acquainted with the complexities of marketplace businesses, which she calls “the ultimate puzzle.” In this post, the entrepreneur-turned-VC (she’s now a general partner at Fuel Capital), describes how automation has transformed the building and scaling of marketplace businesses and streamlined the user experience.

Shopify and the Power of Platforms, stratechery.com
Tech and media analyst Ben Thompson is perhaps best known for his digestible daily newsletter, the Stratechery. But he often goes long when unpacking the dynamics of various marketplace companies, including Airbnb and Uber. In this essay, he uses Amazon and Shopify to highlight the distinction between platforms and aggregators.

Money Out of Nowhere: How Internet Marketplaces Unlock Economic Wealth, abovethecrowd.com
Bill Gurley, now an investor but former longtimeAmazon analyst, explores how internet marketplaces enhance productivity and efficiency, drawing on examples from Ebay, Uber, Upwork, Hipcamp, and Instawork.

Managing Tensions In Online Marketplaces, a16z.com
a16z’s Jeff Jordan taps into his experience as the former SVP and general manager at eBay to explain why marketplaces need to nurture and manage “perfect competition” to thrive.

The Oral History of Travel’s Greatest Acquisition, skift.com
How Booking.com went from a scrappy pet project to a travel juggernaut, as told by the people that lived it.

A Guide to Marketplaces, versionone.vc
Angela Tran Kingyens and Boris Wertz of Version One Ventures updated their all-encompassing guide to marketplaces with new sections on decentralized marketplaces and marketplace exits. The digestible ebook remains a valuable resource for founders looking to seed, grow, and scale marketplace companies.
State of Marketplaces, Menlo Ventures (via vimeo.com)
Menlo Ventures partner Steve Sloane’s presentation provides a great overview of investing trends, including IPO benchmarking for marketplaces, retention metrics, and emerging trends in private marketplaces.

Why It’s Hard to Escape Amazon’s Long Reach, wired.com
WIRED staff writers Louise Matsakis and Paris Martineau provide an exhaustive accounting of Amazon’s many business pursuits, from fashion to home security systems, cloud computing services to groceries. It’s an illuminating look at how the once-modest online bookseller has morphed far beyond its marketplace roots.

The NFX Marketplace Scorecard, nfx.com
James Currier of NFX shares the firm’s internal scorecard for assessing a marketplace’s potential. The deck provides a useful framework for founders to evaluate their strengths and risks.

Visit a16z.com/marketplace-100 for more marketplace-related content.
Appendix
Disclosures

The views expressed here are those of the individual AH Capital Management, L.L.C. ("a16z") personnel quoted and are not the views of a16z or its affiliates. Certain information contained in here has been obtained from third-party sources, including from portfolio companies of funds managed by a16z. While taken from sources believed to be reliable, a16z has not independently verified such information and makes no representations about the enduring accuracy of the information or its appropriateness for a given situation.

This content is provided for informational purposes only, and should not be relied upon as legal, business, investment, or tax advice. You should consult your own advisers as to those matters. References to any securities or digital assets are for illustrative purposes only, and do not constitute an investment recommendation or offer to provide investment advisory services. Furthermore, this content is not directed at nor intended for use by any investors or prospective investors, and may not under any circumstances be relied upon when making a decision to invest in any fund managed by a16z. (An offering to invest in an a16z fund will be made only by the private placement memorandum, subscription agreement, and other relevant documentation of any such fund and should be read in their entirety.) Any investments or portfolio companies mentioned, referred to, or described are not representative of all investments in vehicles managed by a16z, and there can be no assurance that the investments will be profitable or that other investments made in the future will have similar characteristics or results. A list of investments made by funds managed by Andreessen Horowitz (excluding investments for which the issuer has not provided permission for a16z to disclose publicly as well as unannounced investments in publicly traded digital assets) is available at https://a16z.com/investments/

Charts and graphs provided within are for informational purposes solely and should not be relied upon when making any investment decision. Past performance is not indicative of future results. The content speaks only as of the date indicated. Any projections, estimates, forecasts, targets, prospects, and/or opinions expressed in these materials are subject to change without notice and may differ or be contrary to opinions expressed by others. Please see https://a16z.com/disclosures for additional important information.