dormsy
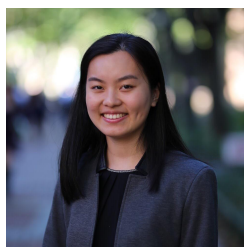
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Executive Summary

Summer vacation, study abroad, and co-ops are staples of the college experience, but for the millions of students who live off-campus, they can mean wasting thousands of dollars paying rent for an empty bed. Subletting helps students reduce rent pressure, but the subletting market is confusing, inefficient, and unsafe. Students spend months using channels like social media and word-of-mouth to transact in an ad-hoc market with no transparency and an abundance of scams.

Dormsy is a structured, secure, and student-friendly marketplace for college subletting. Students sign up with their verified college emails and can use the platform to find and list off-campus rooms and apartments and pay rent. We launched in October 2020 and now have over 425 users, mostly from Penn, and we're starting to expand nationwide. We imagine a future where students of all backgrounds are able to find affordable housing that matches their needs.

Problem

Since 2015, U.S. college enrollment has outpaced new on-campus housing inventory by 10,000 students per year. Off-campus housing is needed to fill this gap, thus it is becoming an increasingly integral part of the university ecosystem.

Nearly 60% of U.S. college students live off-campus away from their parents, amounting to about 3.4MM undergraduates from four-year public and private schools. Most college students will spend at least three months of the year away from campus due to summer vacation, study abroad, and/or academic co-ops. Because housing contracts are typically annual leases and average student rent is around $671/mo., paying for empty beds costs U.S. students an average of $2,013 per year, or nearly $7B across the whole market.

To recover a portion of this rent, many students try to sublet their apartments to other students who themselves may be returning from a semester away, taking summer classes, or interning nearby. Listing or finding a sublet today requires using channels like social media platforms or word-of-mouth to engage with an ad-hoc market with no price transparency and an abundance of rental scammers. This makes subletting both a discouraging and a risky process because the market is confusing, inefficient, and unsafe.

Solution

In July 2020, we released an online spreadsheet at Penn to match sublets with subletters. With each response, we collected survey data indicating the subletting preferences and concerns of students. With a simple Google Spreadsheet, we received over 300 responses in a month, already confirming there were major gaps in existing solutions and market demand for a better alternative. Through our survey results, we further found that over 78% of students prefer to exclusively transact with other students, implying strong demand for a community-based, student-friendly platform. 72% of student hosts are also concerned with security and timeliness when using their

current methods of payment (Venmo or Zelle). Our data shows that students want a secure, structured, and student-friendly marketplace for college subletting.

Dormsy delivers the value proposition students want without the compromises students face with existing alternatives. On Dormsy, students sign up with their verified college emails and use the platform to find and list off-campus rooms and apartments. After chatting with prospective guests or hosts, students can make a booking and pay for their sublet through our platform. Our listing, search, filters, and matching functionalities provide structure. Our email verification and secure payments channel provide security. Our brand and user base promote student-friendliness. We launched our product in late October 2020 and today Dormsy has over 425 users and growing. We have nearly 40 lifetime listings on the site, 45 chats between prospective guests and over 2,700 site visitors.

Stakeholders

Dormsy's platform and the transactions it facilitates involves a number of stakeholders, namely the guest, host, and (indirectly) the landlord of the residence being sublet. For all stakeholders involved, Dormsy aims to provide security, structure, and trust to a confusing environment.

- **Guests and hosts**: We verify that both users are students and provide them with a single location through which they can communicate and transact. Furthermore, by utilizing Stripe, we are able to solve a major point of distrust amongst hosts and guests, by providing secure, verified payments that are quickly deposited into a host's account.
- **Landlords**: We require all sublets listed on our platform to be legal as part of our terms of service. In the future, we plan to work more closely with landlords, as several that we have met with in the University City area have described data and transparency regarding subletting in their properties as "critical" to their business. This will not only help us ensure that listings are compliant with their respective landlords, but also could present itself as an alternative revenue source and growth strategy for Dormsy, whereby we can exchange this data with landlords for better reach amongst their tenants.

We consider the social impact of Dormsy on two dimensions: providing accessible housing and stopping scammers which pervade student housing channels today. The lack of a structured and secure student marketplace excludes large portions of the student community, especially those which are less connected. On the guest side, the ad-hoc nature of the subletting market makes it nearly impossible to find sellers, price-compare and make an informed buying decision. On the host side, the unpredictable nature of the subletting market can result in a large financial liability for hosts. Dormsy helps students easily browse and compare options, which facilitates the market dynamics that ensure fair pricing and affordable options to fulfill a diverse set of needs. As Dormsy grows, it will bring more students into the subletting market, making off campus living more affordable and accessible for guests and hosts alike.

Our other area of impact is in stopping rental scammers. Rental scammers exploit students' naivety or desperation in a number of ways, such as by issuing fraudulent checks or advertising

fake listings. Dormsy verifies student emails and provides users with a secure payments channel and an arsenal of consumer protection tools to mitigate the threat of scammers.

Competition

There are four main channels through which students find sublets today.

1) **Social media networks.** Facebook is the most popular channel students use, since it has groups based on school and city and many options. However, it is nearly impossible to search through the unstructured platform and rife with scammers.

2) **Word of mouth.** Students often resort to searching for housing through their own networks. Whether posting in group chats or reaching out to friends of friends, this method maintains a level of safety and trust. However, it offers very limited options with an unpredictable chance of success.

3) **Hospitality companies (e.g. Airbnb).** These sites are structured and secure, but are tailored to leisure travelers, making them expensive and arduous to share listings on.

4) **Student housing websites.** Whether rival student startups or university sponsored off-campus housing websites, these offer many student friendly options. However, they are often poorly executed, difficult to navigate, and limited to one school

Business Model and Market

We plan to charge a 5% fee on the host for rental payments made through the Dormsy platform. In addition to relatively negligible server costs, our cost structure will include payouts for referrals bonuses. Dormsy currently offers invitees and referrers between $10 and $20 each when a first payment for an account is made or received.

Our initial target market consists of college students in four-year public or non-profit private colleges and universities located in U.S. cities and suburbs. Our first hosts will be students subletting their room in an apartment or house for summer vacation, roughly between the months of June and August. Our first guests will be students looking for summer housing for summer classes or internships. In addition, our first customers will primarily come from schools located in Philadelphia, New York City, and the San Francisco Bay Area, key internship cities responsible for intercity traffic over the summer.

We estimate the U.S. student subletting market to be $344MM driven by 3.4MM full-time off-campus students at 1,584 four-year public and non-profit private colleges and universities. To compute this TAM, we obtained the undergraduate population and location data of each school and matched it with data from HUD on median single-bed rent for that area. U.S. Department of Education data suggests 57% of undergraduate college students live off-campus away from their parents, which we used to estimate the off-campus population at each school. We assumed an average subletting period of 3 months, a 5% Dormsy fee assessed on monthly rent, and that every off-campus student in a perfect market is willing and able to sublet. We cross-checked our market

sizing data with studies by the National Multifamily Housing Council (NMHC). As mentioned earlier, this market is continuing to grow, with U.S. college enrollment outpacing new on-campus housing inventory by 10,000 students per year since 2015.

Revenues and Costs

Our main source of revenue will be through a 5% service fee on the transactions on our site. With an estimated average rent of $671 per month, we expect to make $33.55 per month per listing. We are also exploring additional streams of revenue including charges for premium listings (that will have favorable placements on our search pages), landlord listings, house tours, and background checks.

Currently, our costs stem mainly from infrastructure and development costs. We utilize services like Google Workspace, Heroku, Sendgrid, and GoDaddy (domain registration), resulting in approximately $30 in costs per month. For each payment that takes place on the platform, Stripe charges us 2.9% of the transaction value, as well as a 30 cent fixed cost per transaction. Additional costs could result from our growth strategy. We are currently offering $10 for referrals (to the referee and referred user) that result in a booking. Furthermore, as we continue to expand to other campuses, we plan to hire campus ambassadors to acquire new users and listings. These ambassadors would be hired on a part-time hourly basis, with the potential for bonus compensation based on performance. The exact compensation structure for such an ambassador program has not been finalized.

Engineering Details

Our frontend was built using ReactJS. Our backend was built using Django with the Django Rest Framework to create a REST API. We integrated with Stripe, AWS S3, and Sendgrid APIs, and further used Django Rest Knox for token authentication.

As we iterated on our product throughout the year, we learned several interesting technical insights:

1. Business Logic on the frontend
   a. Business logic should be minimized on the frontend. Bugs are more difficult to fix and deploy, and can negatively affect user experience. Containing business logic to the backend increases feature velocity.
2. RESTful API
   a. Designing a thoughtful REST API can dramatically improve feature velocity and developer productivity. Minimizing data flow to only what is needed and limiting exposed routes increases security, decreases maintenance, and decreases the chance of bugs.
3. User Testing
   a. Obtaining useful feedback required a combination of unstructured interviews, open-ended questions and survey questions. We found that stated preferences

were not always true to a user's actual preferences, so gleaning insights required iterations of talking to users along with quantifiable survey data

Anticipated Challenges and Next Steps

As Dormsy matures as a startup, we anticipate several challenges.

- **Market Size.** As previously noted, the Total Addressable Market for Dormsy is $344MM. While this promises a considerable return given the profit margins of the company, this is likely not a sufficient market opportunity to attract venture investment. Instead, Dormsy will need to seek capital from outside angel investors or use retained earnings to fuel growth.
- **Speed of Iteration.** The ideal usage frequency of Dormsy is annual, driven by students looking for sublets once a year during study abroad, summer vacation, or co-op. The customer journey is on the order of months, starting from the time when students start their search to when they make their first payment. This poses a challenge when it comes to product iteration, as we will not be able observe differences in satisfaction quickly over multiple use cycles. In effect, we will not be able to test hypotheses quickly as we pursue product-market fit.
- **Churn.** Because students graduate, there is effectively guaranteed churn in our market. When combined with the usage frequency of our product, we do not have many opportunities to activate a user over the course of their life. At the same time, once we have acquired a user, we do not have many periods during which we can extract revenue. Thus, CLV has to be driven primarily on margin and low acquisition cost, which are both challenging to affect compared to retention.
- **Long-term Founder Interest.** Similar to the notion of guaranteed churn, our team is passionate about the problem because, as students, we must confront it regularly. However, when considering that the lifespan of a startup can be as long as 10 years, it is important for our team to evaluate our long-run interest in this problem.

None of these challenges on its own is so difficult as to shutter the company. However, for Dormsy to scale, each must be addressed. As for next steps, we first plan to continue iterating on our product. Our next set of features will focus on facilitating lease transfers and housing recommendations, which will make our product more useful for a broader subset of students. We will continue growing our network of listings in key internship cities like San Francisco, New York, Philadelphia, and Seattle.

Dormsy is trailblazing the future of the $100B consumer-to-consumer ecommerce industry. We are creating a platform where the commonalities between its members--such as both being students--and the surrounding infrastructure work hand-in-hand to facilitate a transaction between strangers that might not otherwise occur. We therefore see great potential in applying our model to more than just college subletting, and aspire to one day create a portfolio of trusted marketplaces on the internet.