

Real Estate.

Exploring opportunities to improve real estate with machine intelligence.



Table of contents.

Industry overview	3
iBuyer overview	4
iBuyer trends	9
Tech-enabled real estate brokerages	13
Residential rental models	14
Key takeaways	15



Real Estate

The future of home buying and selling

Industry Overview

- Total value of residential real estate in the U.S.: **\$32 Trillion**
 - Largest asset class in the U.S.
 - Global real estate value: **\$217 Trillion**
 - **75%** of this value is residential
- Annual U.S. residential rental payments: **\$485 Billion**
- Annual U.S. residential transaction value: **\$1.8 Trillion**
 - **5.34 M** existing homes were sold in 2018
 - **667,000** newly constructed homes were sold in 2018
 - **~\$300k** median sale price
 - Annual U.S. residential real estate brokerage commissions: **\$80 Billion**

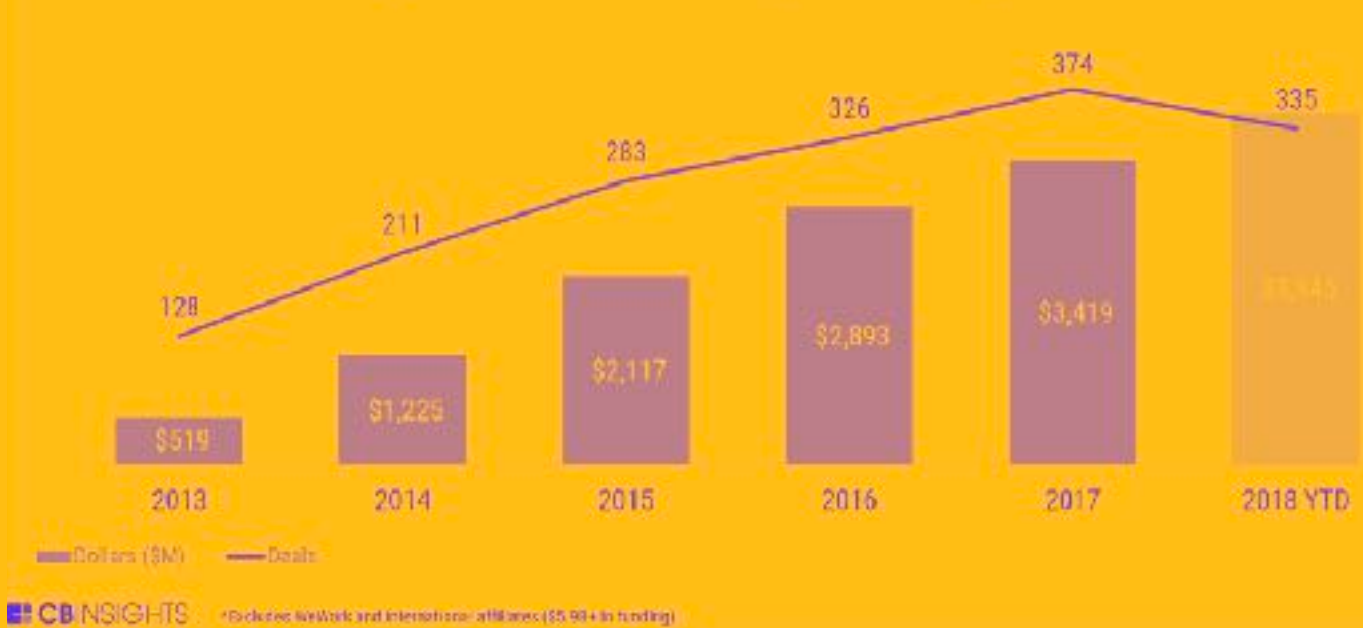
Real estate is the largest asset class and one of the last to adopt technological change. This should present a massive opportunity for entrepreneurs. The opportunity is driven also by industry practices mired in inefficient processes and unnecessary transactional costs defended by self-interested professionals and institutions.

Real estate comprises heterogeneous assets traded in a largely private market. Residential homes typically represent the largest transaction a private individual will make in their lifetime —as a result, buyers and sellers are often hesitant to take any risks with the process. There is also an agency problem: the professional advisors that facilitate the transaction process have an interest in protecting their income, so real estate brokers and lawyers have been resistant to tech-driven innovations that could impact their work.

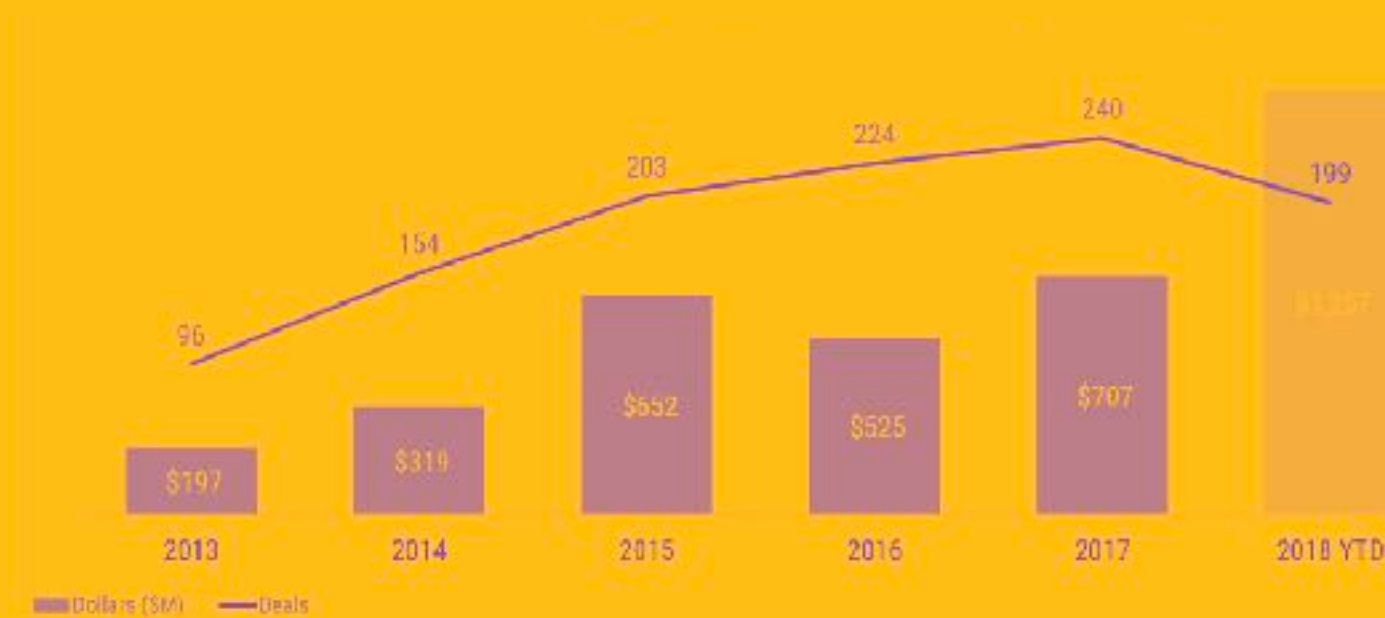




Real estate tech financing trend, 2013-2018 YTD (10/18/2018)



Seed/Series A real estate tech financing trend, 2013-2018 YTD (10/18/2018)



iBuyer Overview

Current residential transaction consumer experience is terrible

- **Frustration** with the slow process and mismatch between average home buying and selling timeline:
 - Avg 4.3 months to buy
 - Avg 2.8 months to sell
- **Transaction costs:** Broker commission (6%) + title costs + origination fees
- Consumers looking to new online channels for superior experiences

How iBuying works in practice

1. Seller fill out online questionnaire about their home
2. iBuyer uses algorithms and technology to determine offer price
3. iBuyer presents seller with a nonbonding offer (typically within 2 days)
4. iBuyer sends inspectors to verify value and assess any needed repairs
5. Transaction closes and iBuyer takes ownership and charges fee (6-8%)
6. iBuyer renovates for resale
7. iBuyer list home
8. Offer is received, enter into closing process



Market Leader: Opendoor

- Can make an offer on your home in hours and can close within a week, giving sellers flexibility to move into their next home exactly when they want to
- Operate as pure market-makers and liquidity provider, allowing homeowners to sell their homes more quickly/efficiently but for a service fee of 6-8% and at a discount to market of roughly 5%
- Opendoor buys the home from sellers outright and looks to sell within 90 days
- M&A: Sept 2018-> purchased Open Listings, a discount online brokerage
 - If a homeowner sells to Opendoor and buys another home through Open Listings, they get a 50% rebate on the buyer's agent commission, or 3%
- By offering instant purchases, integrated mortgages, and other adjacent services (title insurance), Opendoor is trying to build a seamless experience for consumers
- In Mar 2019, raised \$300M from SoftBank at \$3.8B valuation
 - Since inception, raised \$1.5B in equity and \$3.0B in debt financing to purchase homes

Opendoor typical home purchase criteria:

- Single family homes and townhomes
- Purchase price between \$100k-500k
- Maximum 0.5 acre lot
- Homes built after 1960
- Not located in a flood zone
- Home must be owner-occupied or vacant, no currently occupied rentals
- No foundation issues, unpermitted additions, well/septic systems, foreclosures
- No iBuyer has weathered a downturn in the housing market yet, and price appreciation has been a key component of profitability
 - *Net profit margins for iBuyers are relatively thin- roughly 4-5%*
 - Opendoor argues that during a slowdown, it would become increasingly more painful to sell a home, which would impact mobility for homeowners and increase the need for reliable home sales through iBuyers
 - They would also revisit their fee structure to account for increased volatility



Offerpad

Very similar to Opendoor, but offering to buy the same class of homes at a lower price (higher discount) than Opendoor and growing more slowly.

Knock

- Buys you a new house and then sells your old house on the open market. They call it a trade-in program. This allows a seller to let homebuyers bid up the price of the home like they usually would and collect the full value on their existing house.
- Knock uses an underwriting model and attempts to sell on the seller's behalf. If the house does not sell within six weeks, Knock will buy it.

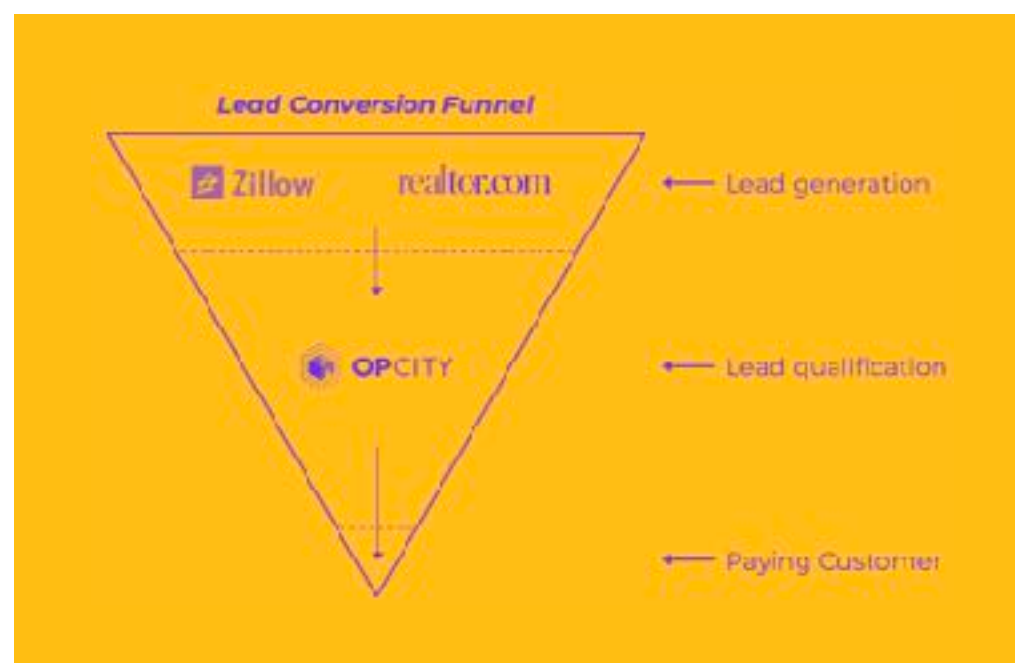
Ribbon

- Buys your new home for you, and you can move in and pay rent until your old house sells.



Zillow: Non-Traditional iBuyer

- Listing services like Zillow and realtor.com have started to move closer to the actual home purchase to take more of the economics from the transaction
 - They've added new services organically (Zillow Offers) and through acquisition (Opcity)
- In 2016, realtor.com purchased Opcity, a startup that connects real estate agents with prescreened homebuyers and sellers using matching algorithms, for \$210M.
 - Realtor.com said the acquisition would broaden its lead generation product portfolio, allowing real estate professionals to choose between a traditional model in which they work leads themselves or Opcity's concierge-based model that provides vetted, transaction-ready leads.
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Zillow stock prices, April 2018-July 2019



- Zillow stock price fell over 50% in the 6 months following the announcement of Zillow Offers being launched, but recovered somewhat in last 6 months as investors have recognized the revenue potential from leveraging their existing platform

Zillow offer advertisement in Phoenix

Get a Zillow Offer

No staging, no showings, no repairs. Move when you're ready.

CASH OFFER

\$ _____

Get your Offer

500+ homeowners near you have requested an offer.

1714 S 80th Ln
Phoenix, AZ 85043

FOR SALE \$220,000
Price set: 05/02/2019
Zestimate: \$201,886

- Zillow advertises Offers for all listings in Phoenix, whether the house is on the market or not
 - Zero marginal cost for Zillow to advertise on their own platform.



Zillow offer lead generation (first 4 months in Phoenix)

- Out of the 20,000 people that filled out the 40-50 question Zillow Offer data request, Zillow actually purchased only 1% of the houses
 - 19,800 people were ready to sell their home and wanted an offer, but didn't get one -- except they are a lead now
 - Zillow thinks selling these leads could be a \$1B annual opportunity with a national rollout - this is where the primary value is for Zillow
 - Would nearly double current Internet, Media & Technology (IMT) revenue.



Zillow 2018 Revenue and COGS

	Year Ended December 31		
	2018	2017	2016
	<i>(In thousands, except per share data)</i>		
Statement of Operations Data			
Statement of Operations Data			
IMT	\$ 1,281,189	\$ 1,076,794	\$ 846,589
Homes	52,365	---	
Total revenue	1,333,554	1,076,794	\$ 846,589
<i>Cost of revenue (exclusive of amortization) (1) (2):</i>			
IMT	104,330	85,203	\$ 69,262
Homes	49,260	---	
Total cost of revenue	153,594	85,203	\$ 69,262

Zillow 2018 Cash Flow

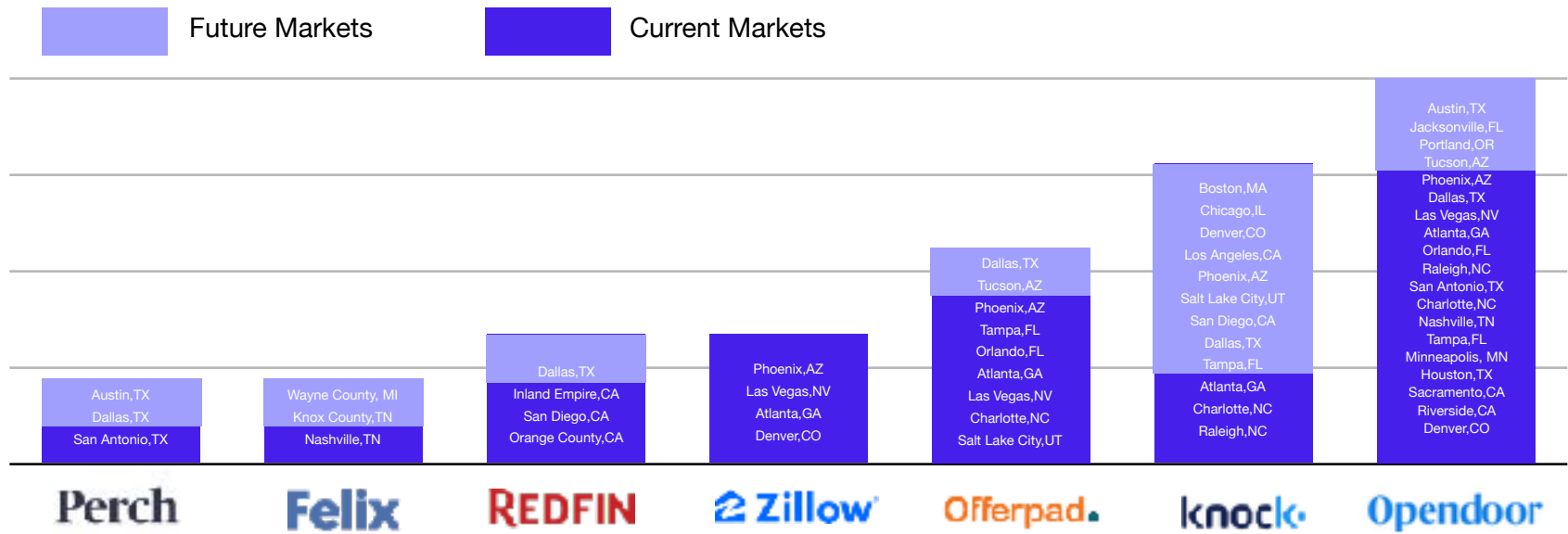
	Year Ended December 31		
	2018	2017	2016
	<i>(In thousands)</i>		
Data			
Net cash provided by operating activities	\$ 3,850	\$ 258,191	\$ 8,645
Net cash used in investigating activities	(622,639)	(247,394)	(65,719)
Net cash provided by financing activities	930,137	97,706	71,528

- Cash flow dynamics for Zillow changed dramatically in 2018:
 - Operating cash flow fell due to rise in home inventory held on their balance sheet
 - Investing cash flow fell due to the purchase of Mortgage Lenders of America and purchase of short term securities (dry powder to buy homes)
 - Cash from financing activities rose due to large long term debt and equity raises to fund future home purchases
- Cash on hand at the end of 2018: \$658M



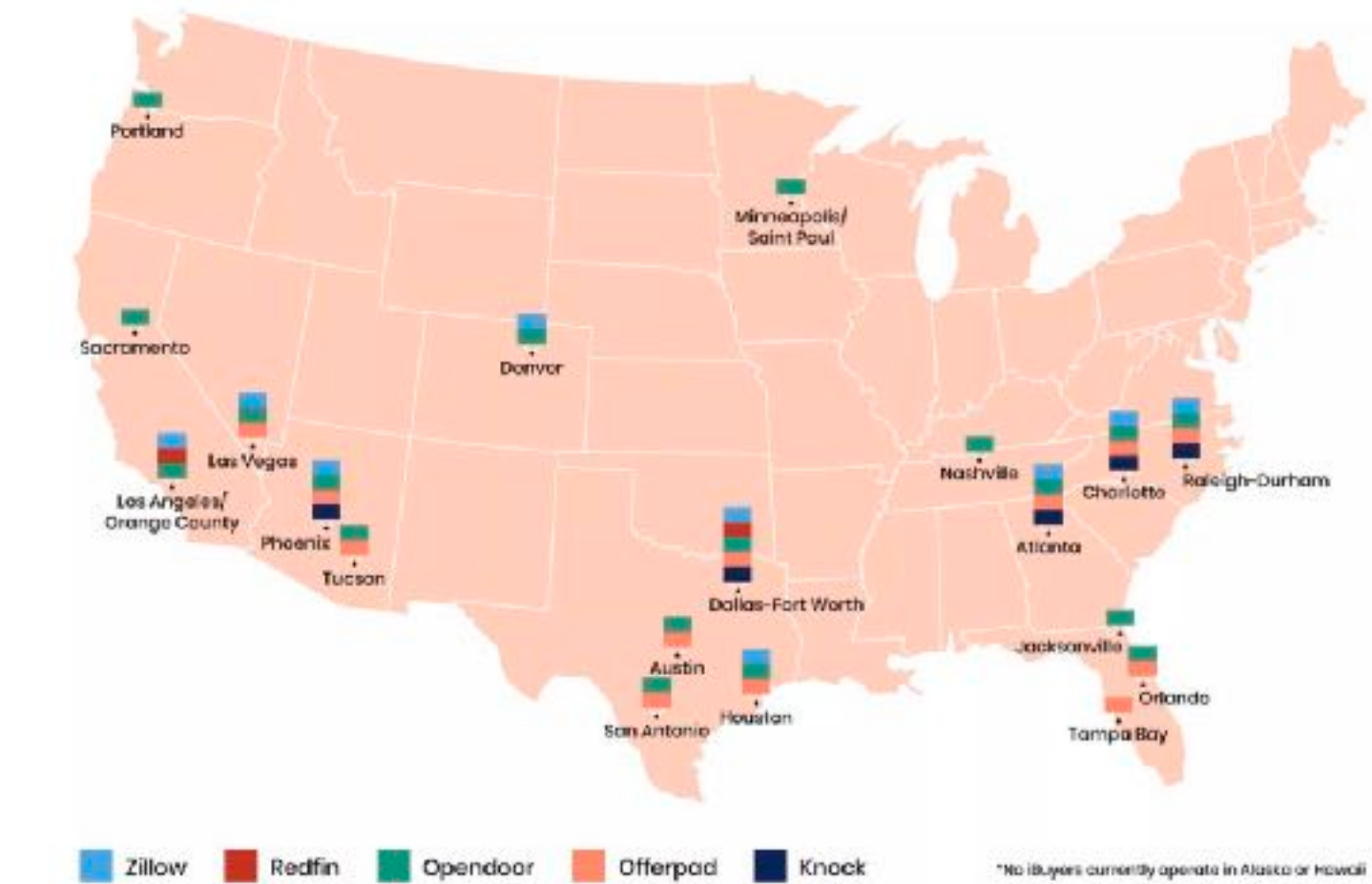
iBuyer Trends

Current iBuyer markets



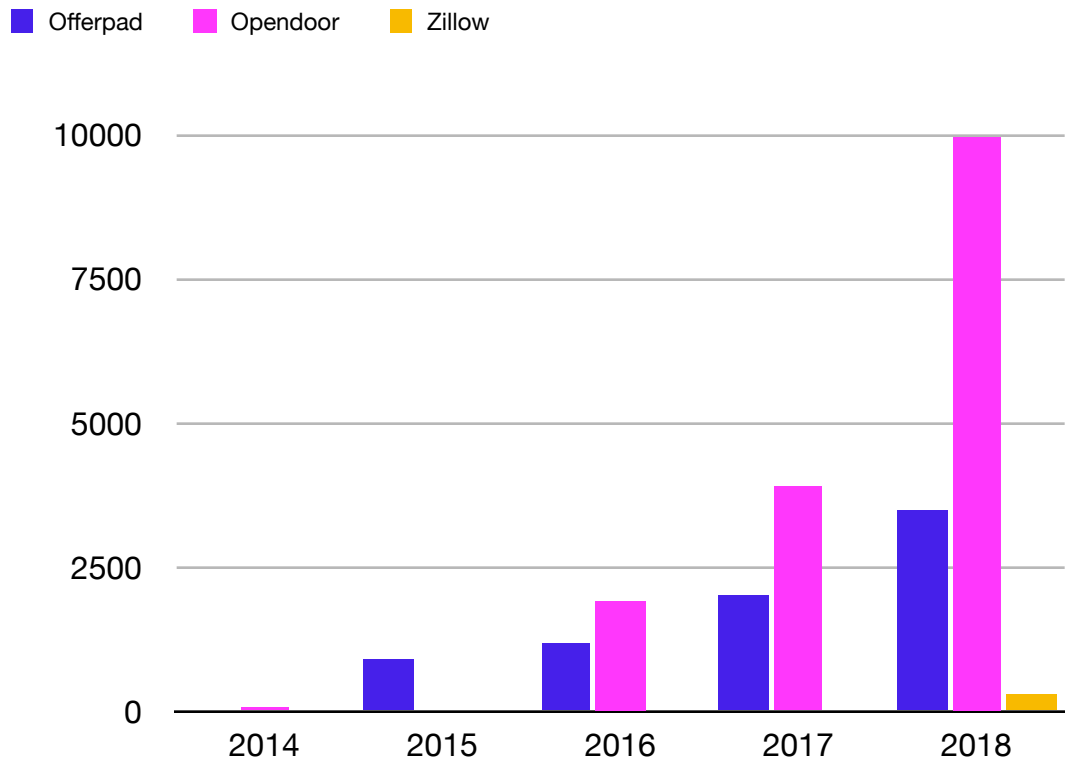
Source: Company's websites and job postings

Where iBuyers are operating





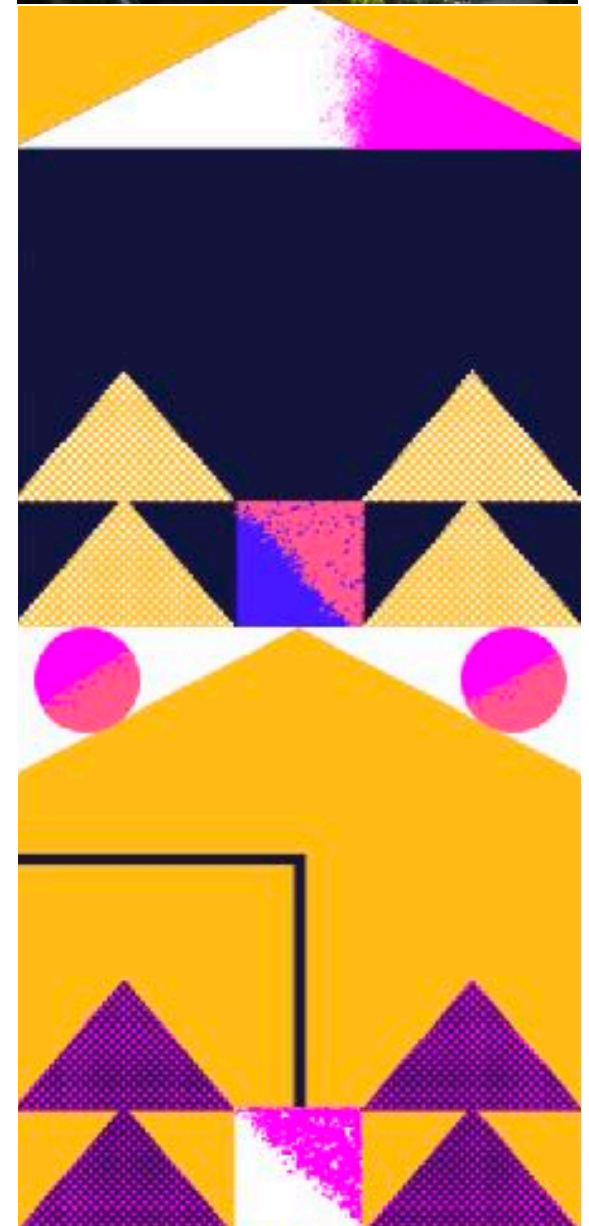
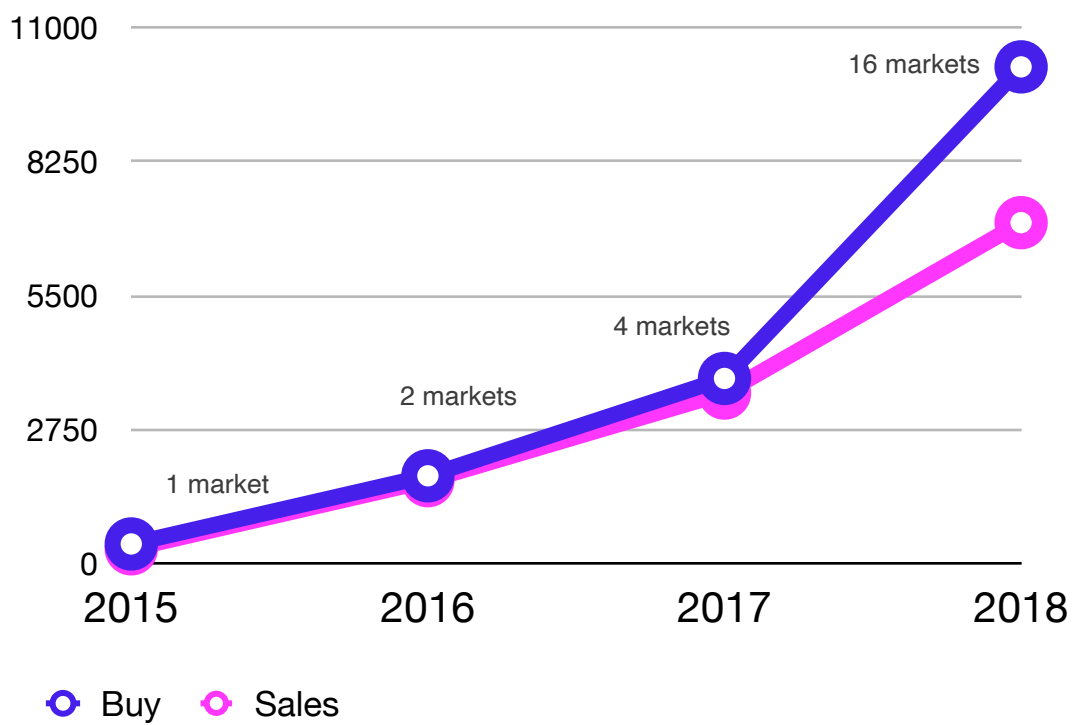
Annual iBuyer home sales



Offerpad, Opendoor data may be missing sales due to purchases by unknown subsidiaries. Chart: Jeff Andrews. Source ATTOM Data Solution,



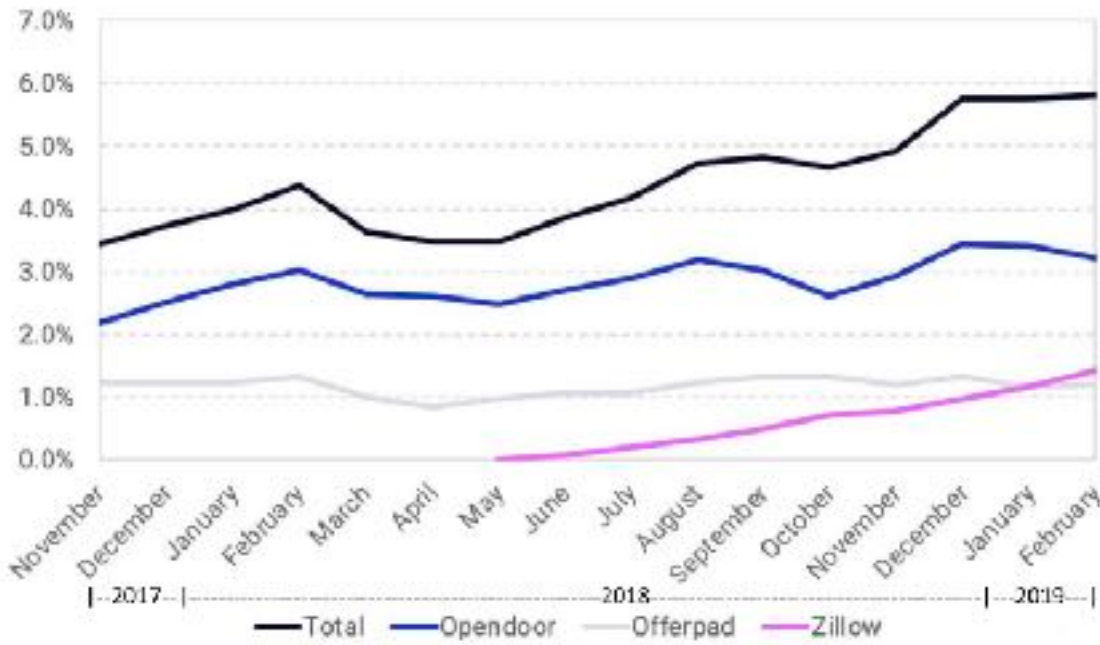
Opendoor's annual buy / sell volume



- Opendoor has had strong growth from 2017 to 2018, and the spread between purchases and sales has grown, reflective of the overall growth rate and time delay between purchase and sale of a home (typically 90 days)
 - This spread also reflects the inventory on hand in the case of a downturn in the market



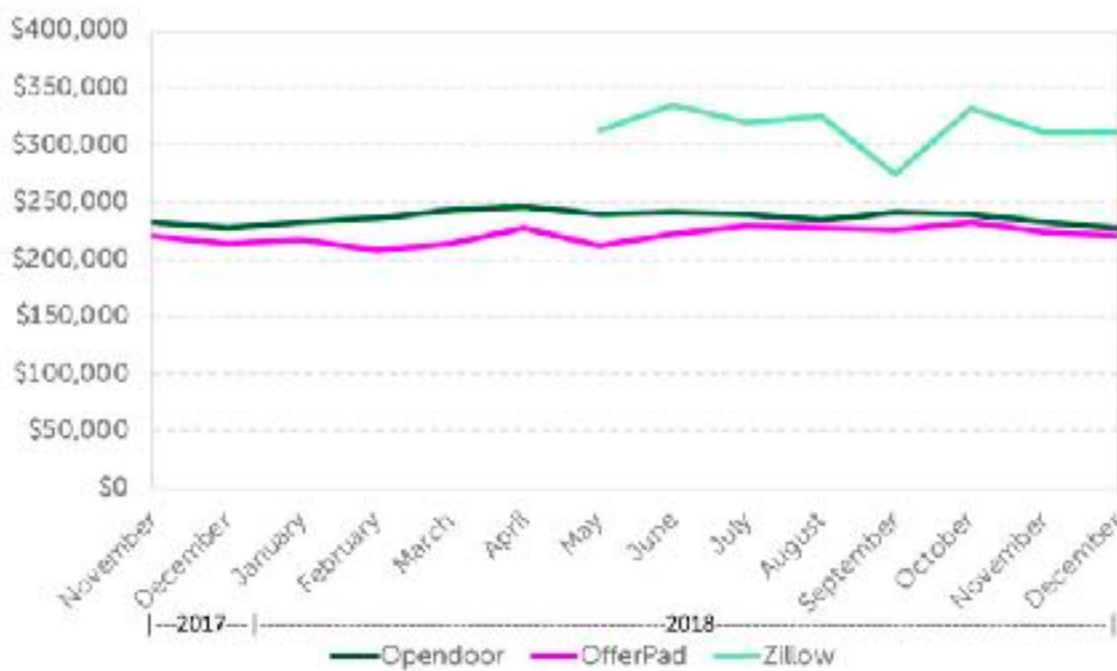
iBuyer market share of total home purchases



- Opendoor has the highest market share of total home purchases, although growth has slowed over the course of 2018 compared to 2017
 - Market share even dropped from Feb 2018 to May 2018
- Zillow has the highest growth rate
- Offerpad is relatively flat in market share

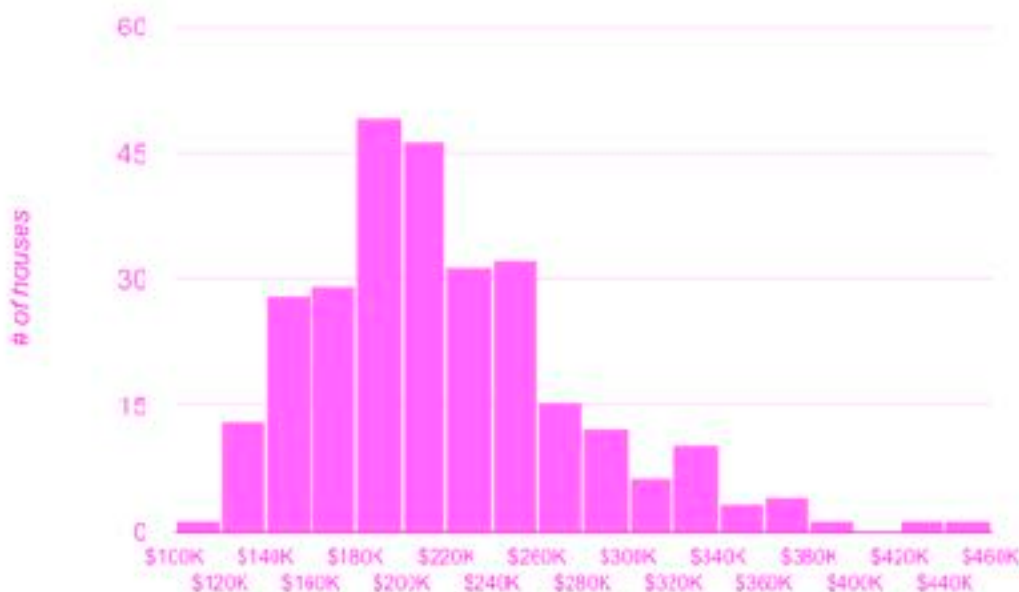
Note: Excludes new build purchases. Source: company press, public financials and industry research.

iBuyer median purchase price



- Opendoor and OfferPad have shown remarkable discipline in terms of maintaining their median purchase price, even as they have moved into new markets and expanded within existing markets.
 - Zillow has entered at a 30-40% higher price point – this could lead to cycle risk

Opendoor purchase price mix (2017)



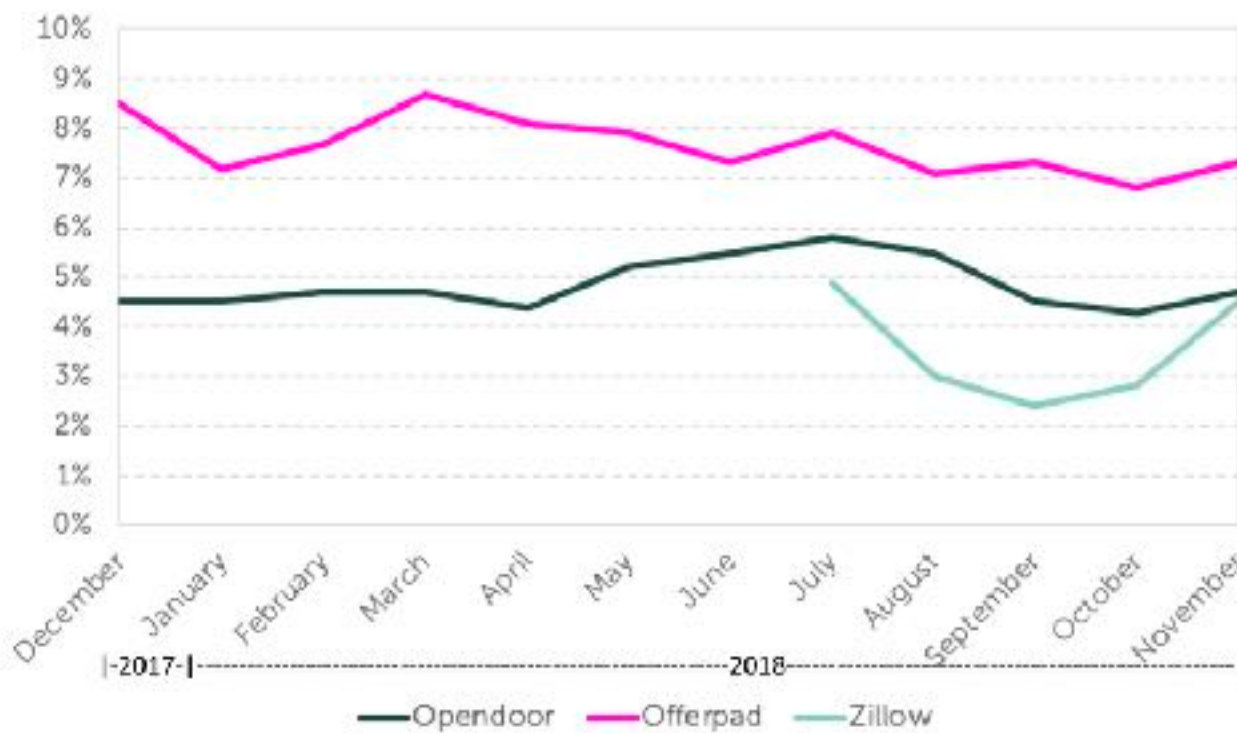


% of total U.S homes within value tiers



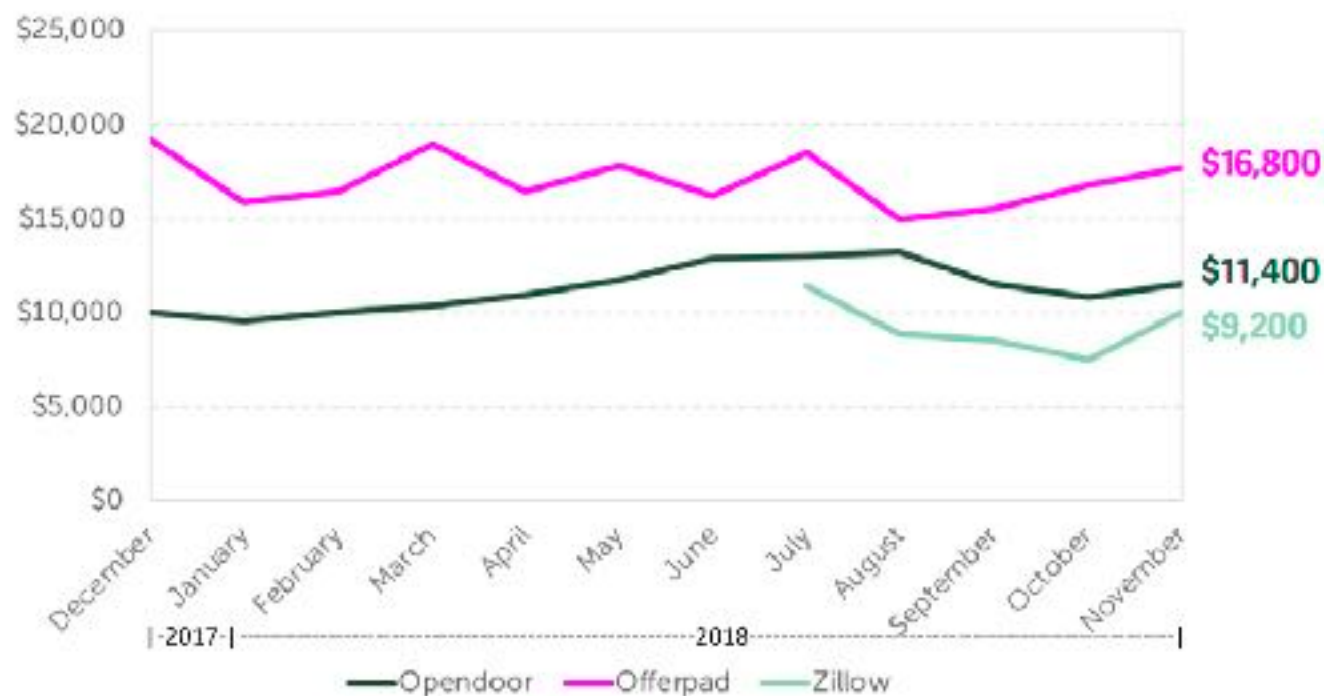
- 37% of total housing in the United States is within the range of \$100k-\$300k, and in the iBuyer sweet spot of \$150k-\$250k, it's likely closer to ~25% of total housing
 - This gives a rough approximation for where iBuyer market penetration may flatten

iBuyer price appreciation (%)



- iBuyers typically are not giving offers at deep discounts like home flippers do
 - Opendoor averages 4-5% discount and Offerpad at about 7-8%.
 - Smaller sample size with Zillow as sales began to ramp in 2018, but trending toward similar appreciation % as Opendoor.
- iBuyer net profit margins are relatively low and depend on continuing to capture price appreciation opportunities.

iBuyer price appreciation (\$)





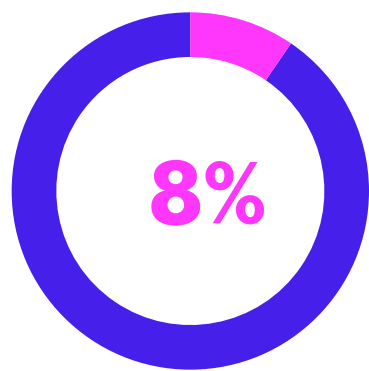
Revenue build-up: 2018

	Opendoor	Offerpad	Zillow
Total homes sales	7,200	3,500	177
Gross revenue	\$1.7 billion	\$840 billion	\$52 billion
Net revenue	\$200 billion	\$118 billion	\$4.5 billion
Net revenue per home	\$ 27,800	\$ 33,600	\$ 25,000
Net margin	Anywhere from 0%-5%		0%-1%

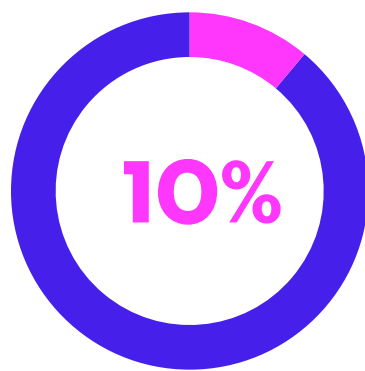
Tech-enabled real estate brokerages

Technical % of employee base

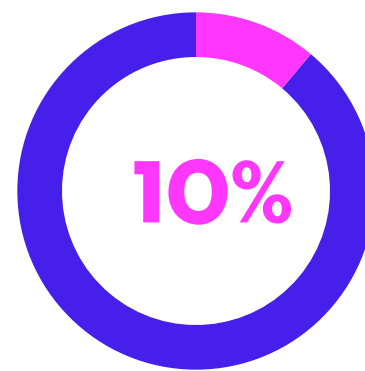
- Compass describes itself and is valued as a technology company, although that may not be the case in practice



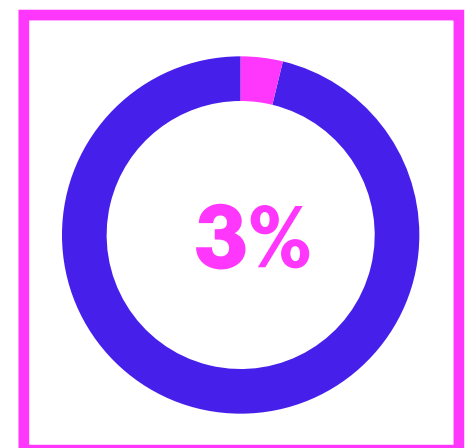
Purplebricks



Redfin

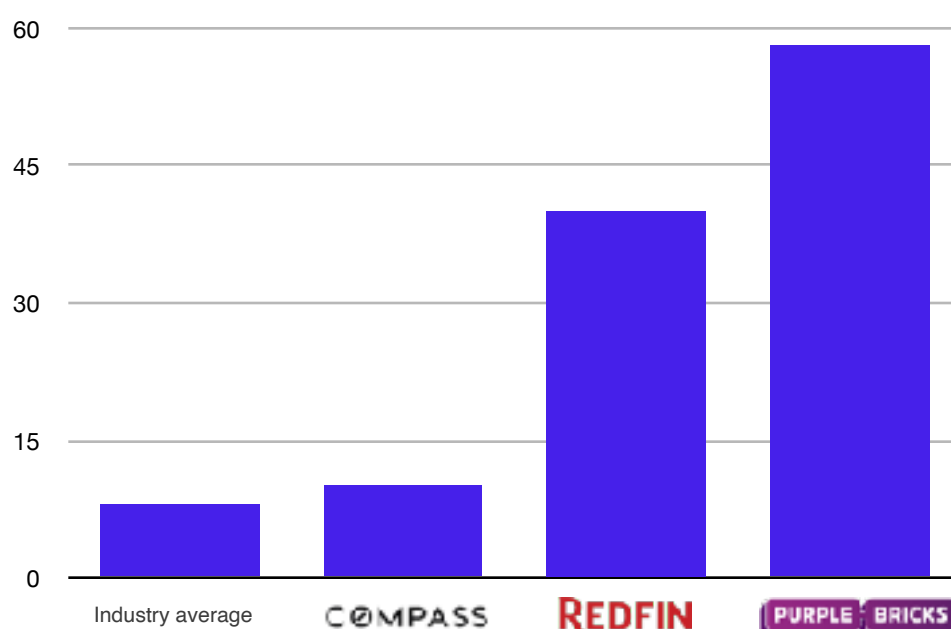


DuProprio



Compass

Avg # of transactions / agent / year



- Redfin and PurpleBricks are 10x more efficient than Compass in terms of leveraging their agent base to complete transactions
- RedfinNow and Keller Williams Offers began testing iBuyer programs in Dallas in 2019
- According to NAR statistics, 65% of people in the U.S. go with the first real estate agent they talk to— they don't price compare
 - If brokers add iBuyer capabilities, they may have an advantage vs incumbents through owning the client relationship up front.



Residential rental models

In the rent-to-own model, tenants can have a portion of their rent payment applied toward a down payment to eventually buy the home they're renting. Prior to the most recent financial crisis, this was mostly offered by individual homeowners. In the years following the crisis, it became a more common option as large REITs purchased foreclosed homes and implemented the model on a bigger scale.

In 2018, Americans spent ~\$485B on rent across 45M renters. The rent-to-own space is positioned to continue growing as more millennial and gen z homeowners enter the market, faced with home prices and mortgages out of their reach in many parts of the country.

Divvy – traditional rent-to-own

- Divvy makes homeownership more accessible via its tech-enabled rent-to-own platform. Divvy purchases homes and offers them to renters with an opportunity to become a homeowner within three years.
- In economic downturns, rental prices have typically stayed the same or increased. As a result, Divvy's business model allows it to maintain its margins in the event of an economic downturn.

Rezi – rental arbitrage

- Takes long leases of residential property and rents out the space on shorter terms at a profit.
- Pure market arbitrage facilitated by the greater scale of a tech platform and homeowners' willingness to accept a tenant rent discount in exchange for offloading of risk.
- Business model requires a ton of capital to scale and may become commoditized.
- The commercial market is less likely to offer such a service, given the larger scale of typical commercial real estate owners and their capacity to take short term lease risk.



Key takeaways

1. iBuyer market is increasingly crowded and full-service

- A. No scrappy startups in this space, virtually all players are large and well-funded
- B. With little opportunity to differentiate in terms of customer experience, winners are being determined by funding and economies of scale
 - Narrow profit margins pushing players to integrate as many adjacent services as possible and become one-stop-shops - mortgage, title insurance, etc
 - None of these models are novel- they are just enabled through massive funding
- C. *Likely not worth competing directly with multiple well-capitalized incumbents right now*

2. Ultimate iBuyer penetration of the residential transaction universe may be limited

- A. For business model to work (limiting cyclicity/downside), iBuyers have to stay within a relatively narrow band of home values and geographies with fungible home types
- B. Target market opportunity may top out around 20-25% penetration- iBuyer share is already almost 6%
 - Offerpad market share is already flattening
- C. Human psychology plays a role- home purchases/sales are still a low-frequency, high-value proposition for individuals. Single biggest transaction most person make in their lifetime.
 - Loss aversion leads most people to be willing to pay more to have a human to guide them through the process and lower risk
- D. The vast majority of transactions (80-90%) will still involve agents in the near to medium term.
 - Opendoor is actively working with agents to continue growth into new markets and deeper penetration into existing markets
 - Startups to look for are ones that work within and augment the existing agent framework/workflow

3. Adjacent rental space is also crowded and capital intensive

- A. Rent-to-own is somewhat crowded with fragmented legacy incumbents – real estate investment firms offering rent to own models proliferated after the real estate crash
- B. Even more capital intensive than iBuyer model because homes are held on the books for years rather than sold within months
- C. Not likely scalable without huge capital infusion, making this less attractive

4. Potentially interesting real estate startup models to investigate in next report

- A. Automating transaction workflow
 - Title insurance
 - Disclosures
 - Mortgage documentation
- B. Landlord rental services
 - Guaranteed rental pay
 - Tenant maintenance/management
- C. Full-stack brokerage but more tech-enabled than Compass
 - Own relationships at the top of the funnel and subsequently layer in iBuying, title insurance, mortgage capabilities.



BASIS SET VENTURES

