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Report Date: December 16, 2021	Industry: Real Estate Services
Company: KE Holdings Inc.	Stock Price: \$18.68
Ticker: BEKE US	Market Cap: \$22.2 billion
	Average Daily Volume (3-month): \$196.6 million

BEKE: Luckin Coffee's for *These Closers!*

Summary

We are short BEKE because we conclude the Company is engaged in systemic fraud, **by our estimate, inflating its new home sales GTV by over ~126%** and its commission revenues by approximately ~77–96%. We found massive discrepancies between the transaction volumes, store count and agent count reported to investors and the transaction data from our multi-month data collection program from BEKE's platform. We corroborated these discrepancies by spot-checking our findings through primary due diligence on BEKE's stores, including field interviews and site visits.

BEKE's mantra, oft repeated on Company earnings calls, is “doing the right thing, even if it is difficult.” Nothing could seem further from the truth. Put simply, we found massive fraud, including a **likely sham acquisition** seemingly designed to mask the fraudulent revenues. Our field work found **ghost stores, clone stores** and undisclosed schemes to inflate revenues by round tripping cash through connected brokerages. Similar to Luckin Coffee, this is a real business with significant amounts of fraud. The following is a road map through BEKE's multivariate fraud.

GTV and Revenue Inflation. BEKE claims to operate China's leading integrated housing transaction platform. BEKE's value proposition is built on its claim to have the leading market share, measured by gross transaction value (GTV), in brokered housing transactions in China. The Company claims a market leading GTV in existing and new home sales through its in-house brokerage (Lianjia) and its connected stores. BEKE also claims a GTV growth rate that vastly outperforms the underlying housing market.

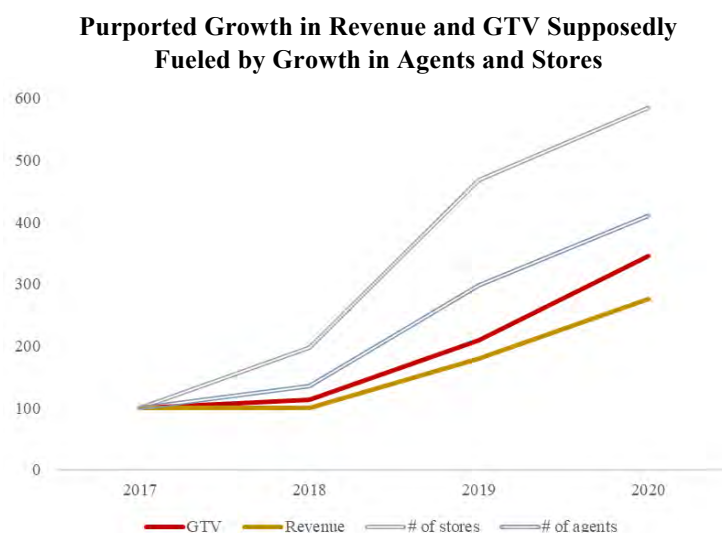
We wrote a program to collect the transaction data on BEKE's platform. This is a similar approach to how we researched JOYY and GOTU. Then we spot-checked the results through field interviews, site visits and physical store checks. The results showed that BEKE, in our opinion, is massively inflating the GTV of new home sales on its platform and the commission revenues derived therefrom. Based on data collected from BEKE's platform over the third quarter and extrapolated from half of the second quarter of 2021, we estimate that BEKE's platform GTV was only RMB 1,177 billion in 2Q-3Q 2021, roughly a **~65% inflation** of the claimed GTV over the 2Q-3Q period. In the critical new home sales category, the primary driver of BEKE's revenue, we estimate that BEKE **overstated GTV by ~126% in 2Q-3Q 2021.**

RMB BN	2Q 21	3Q 21	2Q-3Q 2021
Reported home sales GTV	1,150	788	1,939
Home sales GTV estimate from collected data	656	521	1,177
Inflated %	75%	51%	65%

Our platform data collection showed massive exaggeration of GTV, but even this might understate the magnitude of the deception, as our field work and site visits indicate that the platform contains a significant inflation of stores and agents.

Because BEKE's commission revenue is a function of its GTV, and principally BEKE's new home sales GTV, we conclude from our estimates that BEKE's revenues are significantly inflated even at BEKE's reported commission rates. However, based on field work and agent interviews, we believe that BEKE's real commission rates are lower than claimed. We estimate that **BEKE's revenues are inflated by approximately ~77-96%**. We also found evidence that the Company is round-tripping cash to franchised brokerages in order to artificially inflate commission revenues.

Ghost Stores: Field Work Shows Fake Stores on BEKE's Platform. The graph below uses BEKE's reported numbers to show the relationship between stores and agents on the platform on one hand, and the resulting reported revenue on the other. It is clear that the number of agents and stores drives revenue. However, we conclude that far fewer stores and agents use the platform (or even exist) than BEKE claims.



Our data collection of BEKE's platform indicates that the reported total store count at the end of 2Q was inflated at least 23%. However, this likely understates the true extent of the deception.

Field work and site visits to the stores on the platform show a pattern of ghost stores among brokerages that are listed by BEKE as "active" on its platform, and yet were shut down or nonexistent when visited. Accordingly, we believe that BEKE operates far fewer brokerages than even the count on its platform shows.

One example is the Zhonghuan store at Nanchang Ershishanzhong, which was shown to be 'active' on its platform, with close to 100 properties listed for sale from that brokerage. But when our investigator visited the address for the store from its SAIC registration, they found a derelict and abandoned store front located in a former gate guard's room.

Ershishanzhong Store Registered Address



Source: Screenshot of SAIC Registration Displayed on BEKE's Platform and MW Investigator's Photo

In another example in Sanhe Langfang, we found two separate active stores on the platform at the exact same location. Upon visiting the store, the agent confirmed to our investigator that the two stores had been folded in to one, despite both appearing as two separate and distinct brokerages on BEKE's platform.

Only one Lianjia Store was found following the directions



Source: Site Visits: Langfang Tianyangcheng branches No. 2 and 15 are the same store

Where we should have found two stores, we only found one. And this was far from the only instance in which site visits and field work uncovered one store masquerading as two or more stores on the platform.

Of the 51 Lianjia stores we should have found in Langfang, **19 were ghost stores**. In this city alone, site visits and field work indicate that BEKE overstated the store count by 59%. We believe that Langfang is representative of the Company's web of lies, and that such **ghost stores are endemic**.

We even found a pattern of **clone stores**, in which multiple stores appear on BEKE's platform with the same or similar location. Field work indicates that despite the appearance of multiple active stores, often only one exists in practice. This pattern of clone stores is powerful evidence supporting our conclusion that there are far fewer stores than appear on BEKE's platform, meaning that BEKE's exaggeration of its store count to investors is likely far more egregious than even the platform data suggests.

Sham Acquisition. One of the hallmarks of US-listed Chinese companies that have collapsed amid evidence of fraud is the use of sham transactions to funnel shareholder money and burn off non-existent cash balances. Typically, the company overstates the value of an acquired asset, sometimes secretly purchased from proxies connected to insiders. Here we found an example that we think is textbook. SAIC data show that BEKE routed part of an acquisition through a straw buyer controlled by likely proxies,¹ a trick we have seen many times among US-listed Chinese companies to inflate the purchase price of the asset.

Even Agent Count Overstated.

BEKE's is a multivariate fraud, with layers of deception metastasizing throughout its business and representations to investors. Our data collection of BEKE's platform indicates that the agent count BEKE reported in its IPO prospectus, secondary offering, and other financial reports is substantially inflated. But much like the store count, field work and independent evidence from government real estate registries suggest that the agent count is even more exaggerated than appears at first.

For example, in BEKE's primary market, Shanghai, it claims to have 21,000 agents. But SAIC data for its three Shanghai brokerage subsidiaries show only 9,998 employees, **indicating that BEKE is significantly inflating its agent count.** We see the same pattern when we compare BEKE's disclosures with independent records from the Company's other key market, Beijing.

BEKE has made it clear that GTV and revenues are a function of the number of agents it employs, meaning that such agent overstatement tracks closely with other independent data points showing GTV and revenue exaggeration.

Ultimately, we think BEKE is defrauding the capital markets by exaggerating its GTV, new home sales, revenues, agents, and stores.

Data Collected from BEKE's Platform Indicates Massive New Home GTV and Revenue Fabrication

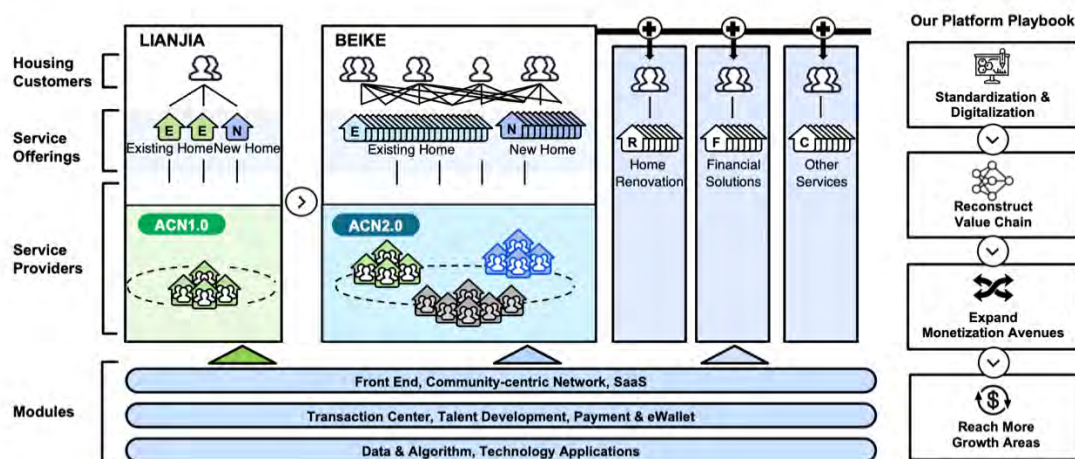
We wrote a program to collect the transaction data on BEKE's platform and spot-checked the results with public record searches, field interviews, site visits, and physical store checks. (See Appendix I for a description of the methodology of collection and estimation.) We conclude that BEKE is massively inflating the GTV of new and existing home sales on its platform and the commission revenues derived therefrom. Our estimate from the data collected from BEKE's platform indicates that that BEKE's platform GTV was only RMB 1,177 billion in 2Q-3Q 2021, roughly a **~65% inflation** of the claimed GTV over that six-month period. In the critical new home sales category, the primary driver of revenues, we estimate that BEKE overstated GTV by **~126%** in 2Q-3Q 2021.²

BEKE's foundational claim to investors is that it operates China's leading integrated housing transaction platform for the sale of new and existing homes. BEKE claims that its "platform playbook" enables the digitization of housing transactions through its agent cooperation network (ACN), a SAAS residential real estate platform that captures online and offline sales transactions for new and existing homes in China by Company owned Lianjia brokerages and connected stores.³

¹ SAIC data is from QiChaCha.

² Our program captured the transaction data on BEKE's platform from May 25 to October 22, 2021. Please see Appendix I for data collection methodology.

³ BEKE, F-1 Prospectus and 2020 Annual Report



Source: BEKE August 2021 investor presentation⁴

BEKE's platform primarily generates revenues through commissions from the sale of new and existing homes through two networks of real estate brokerages: 1) Company-owned Lianjia stores, and 2) brokerages that are supposedly not owned by the Company but sell homes through BEKE's platform (e.g. Deyou and other brokerage brands).

BEKE claims that as its market share of home transactions through its platform grows, this ballooning GTV will produce network effects allowing BEKE greater pricing power for fees and commissions. Management referred to such network effects as creating a "self-reinforcing virtual cycle of efficiency and stack scalability..."⁵ which further enhances the appeal of the platform. Thus, most analysts cite GTV as the primary driver of BEKE's prospects and its stock price.

To assess the authenticity of BEKE's reported GTV and associated commission revenues, we wrote a program to collect the publicly available booking data on BEKE's platform. Details of its methodology are in **Appendix I**.

The program begins with the Find Agent function in the app. After finding the agents, it collects the stores with which they are affiliated and the store information. Then it collects the transaction information and other transaction details that are included in its code. The BEKE's platform contains at least 15 collectable data points, including the total number of new and existing home sales on the platform. The Lianjia and Deyou agents with whom we spoke also confirmed that the transactions posted on the external network match up with sales transactions on their internal network.⁶ We collected and analyzed code and detailed transaction data accessible via BEKE's external platform from May through mid-November 2021, enabling us to compare BEKE's claimed GTV over that period to the GTV evidenced by the data on BEKE's platform.

To verify that our collected data was comprehensive, we compared the key metrics from the data we collected from the platform with BEKE's SEC disclosures. BEKE reported connecting with 278 real estate brokerage brands other than Lianjia.⁷ In our July data collection, we identified 310 brands. BEKE stated that its Lianjia stores operate in 29 cities in China.⁸ Our collected data captured Lianjia brokerage transaction data in 29 cities. BEKE reported that its

⁴ https://s25.q4cdn.com/166451781/files/doc_financials/2021/q2/BEKE-2Q21-Investor-Presentation.pdf

⁵ BEKE, Q1 2021 Earnings Call, May 19, 2021.

⁶ The main differences between the internal and external platform data displayed was that the externally displayed data did not show buyer and seller information and the transaction postings would be delayed by about two weeks to prevent outside buyers or agents from trying to interfere with the transaction, i.e. poach sales.

⁷ BEKE 2020 20-F, p.60

⁸ BEKE 2020 20-F, p.60

platform includes connected brokerages in “more than 100 economically vibrant cities in China.”⁹ We collected transaction data from connected and franchise stores with agents for 142 cities, including Beijing and Shanghai.

BEKE claimed that the GTV on its platform from home sales was RMB 1,150 billion and RMB 788 billion in 2Q 2021 and 3Q 2021, respectively. However, the data collected from BEKE’s platform implies 3Q platform GTV of RMB 521 billion, compared to a reported RMB 788 billion, a ~51% overstatement. Adjusting for the partial Q2 data, using company favorable assumptions yielded an estimated ~75% overstatement. Our combined estimate for Q2-Q3 is that BEKE inflated its reported platform GTV by **roughly ~65%**.

RMB BN	2Q 21	3Q 21	2Q-3Q 2021
Reported home sales GTV	1,150	788	1,939
Home sales GTV estimate from collected data	656	521	1,177
Inflated %	75%	51%	65%

Source: MW Data Collection

a. New Home Sales GTV Inflated by ~126%

BEKE claims that its GTV from **new home sales** on its platform was RMB 908 billion in Q2-Q3, 2021.¹⁰ Based on the number of new home sales collected and the average sales price reported by BEKE, we estimate that BEKE’s actual GTV from new home sales was only RMB 402 million, **indicating that BEKE likely inflated new home GTV by at least approximately ~126%**.

The methodology for comparing BEKE’s claims against the data we collected for new home sales on its platform was straightforward and required few assumptions. We collected data covering late May through mid-November 2021, which gave us the number of new home transactions on the platform during that period for both Lianjia and connected brokerages. We then multiplied this transaction data by the new home prices previously disclosed by BEKE, which given the exaggeration evident throughout BEKE’s business, is company favorable.

In its SEC filings, BEKE disclosed the average price per new home transaction on its platform for both Company owned and connected brokerages in 2020. For Lianjia, BEKE disclosed GTV and the number of transactions, which yield an average price of RMB 2.06 million per new home. For the connected brokerages, BEKE numbers equate to an average price of RMB 1.4 million per new home.¹¹ Independent housing data shows that the price of new homes in China has remained flat from 2020 to 2021.¹² Accordingly, we use the average prices for 2020 reported by BEKE in its SEC filings to estimate the associated Q2 and Q3 2021 GTV from the collected transaction data.

The table below shows the number of new home transactions collected from BEKE’s platform for Lianjia stores for two overlapping 76-day windows.¹³

Lianjia-New Home Sales

⁹ BEKE 2020 20-F, p.54

¹⁰ BEKE 6-K, [August 12, 2021](#), [November 9, 2021](#)

¹¹ BEKE 2020 20-F, pp. 91, 99

¹² <https://www.creprice.cn/>

¹³ The data from the BEKE platform is available in 76-day increments.

May 25, 2021 - Aug 8, 2021				June 30, 2021 - Sep 13, 2021			
Ref.	City		# of transactions	Ref.	City		# of transactions
1	Dalian	大连	1,119	1	Dalian	大连	1,144
2	Shenyang	沈阳	680	2	Shenyang	沈阳	660
3	Jinan	济南	1,082	3	Jinan	济南	782
4	Chengdu	成都	4,180	4	Chengdu	成都	4,240
5	Zhengzhou	郑州	1,046	5	Zhengzhou	郑州	745
6	Changsha	长沙	432	6	Changsha	长沙	339
7	Qingdao	青岛	585	7	Qingdao	青岛	495
8	Foshan	佛山	209	8	Foshan	佛山	181
9	Nanjing	南京	787	9	Nanjing	南京	699
10	Yantai	烟台	522	10	Yantai	烟台	403
11	Guangzhou	广州	659	11	Guangzhou	广州	664
12	Shijiazhuang	石家庄	337	12	Shijiazhuang	石家庄	315
13	Tianjin	天津	808	13	Tianjin	天津	717
14	Hefei	合肥	388	14	Hefei	合肥	348
15	Wuhan	武汉	1,238	15	Wuhan	武汉	1,129
16	Xi'an	西安	614	16	Xi'an	西安	693
17	Hangzhou	杭州	312	17	Hangzhou	杭州	340
18	Wuxi	无锡	159	18	Wuxi	无锡	94
19	Beijing	北京	1,661	19	Beijing	北京	1,379
20	Suzhou	苏州	363	20	Suzhou	苏州	323
21	Shanghai	上海	1,278	21	Shanghai	上海	1,328
22	Langfang	廊坊	97	22	Langfang	廊坊	69
23	Xiamen	厦门	154	23	Xiamen	厦门	108
24	Chongqing	重庆	859	24	Chongqing	重庆	940
25	Dongguan	东莞	68	25	Dongguan	东莞	57
26	Shenzhen	深圳	222	26	Shenzhen	深圳	207
27	Zhongshan	中山	55	27	Zhongshan	中山	61
28	Huizhou	惠州	49	28	Huizhou	惠州	40
29	Haikou	海口	0	29	Haikou	海口	1
Total			19,963	Total			18,501

Combining the average value per transaction reported by BEKE in its SEC filings with the number of home transactions revealed in our data collection, we estimate that BEKE's GTV from the sale of new homes through both its Lianjia and connected brokerages was only RMB 402 billion in Q2-Q3 2021. **Therefore, based on the collected data we estimate that BEKE inflated GTV by at least ~126% in Q2-Q3 2021.**¹⁴

¹⁴ For details on the methodology, assumptions, data and calculations in the estimates see Appendix I.

The Collected Data Suggest BEKE Grossly Overstates its New Home GTV

RMB M	Avg. Price	76 days (May 25 - Aug 8)		2Q 2021 (91 days)	2Q 2021	2Q 2021
	per Home	# of new homes	Estimated GTV	Estimated GTV	Reported GTV	Inflated%
New homes - Lianjia	2.06	19,963	41,099	49,211	83,800	70%
New homes - Connected Stores	1.40	93,975	131,668	157,655	414,500	163%
Total		113,938	172,767	206,866	498,300	141%
RMB M	Avg. Price	76 days (Jun 30 - Sep 13)		3Q 2021 (92 days)	3Q 2021	3Q 2021
	per Home	# of new homes	Estimated GTV	Estimated GTV	Reported GTV	Inflated%
New homes - Lianjia	2.06	18,501	38,089	46,108	72,550	57%
New homes - Connected Stores	1.40	87,998	123,293	149,249	337,550	126%
Total		106,499	161,382	195,358	410,100	110%
RMB M	Avg. Price	152 days		2Q-3Q 2021	2Q-3Q 2021	2Q-3Q 2021
	per Home	# of new homes	Estimated GTV	Estimated GTV	Reported GTV	Inflated%
New homes - Lianjia	2.06	38,464	79,189	95,319	156,350	64%
New homes - Connected Stores	1.40	181,973	254,961	306,904	752,050	145%
Total		220,437	334,150	402,224	908,400	126%

Put simply, data collected over months directly from BEKE's platform strongly indicates that the Company is massively exaggerating new home GTV and revenue from its platform, a pattern we also see when we analyze existing home sales.¹⁵

b. Existing Home Sales GTV Also Significantly Exaggerated

BEKE reported GTV of RMB 1,030 billion from existing home sales in Q2-Q3, 2021. However, our estimate from the data collection from the BEKE platform indicates that the real GTV was only approximately RMB 775 billion in that period, meaning that we estimate a ~33% GTV inflation over Q2-Q3 2021 for existing home transactions.

RMB M	2Q 2021			3Q 2021			2Q-3Q 2021		
	Reported	MW estimate	Inflated%	Reported	MW estimate	Inflated%	Reported	MW estimate	Inflated%
GTV of existing home sales by Lianjia	309,500	216,839	43%	185,300	160,866	15%	494,800	377,706	31%
GTV of existing home sales by connected stores	342,500	232,630	47%	192,900	164,791	17%	535,400	397,421	35%
GTV of existing home sales	652,000	449,469	45%	378,200	325,657	16%	1,030,200	775,126	33%

The methodology for estimating existing home GTV required more assumptions than for new homes. Our estimate of BEKE's GTV exaggeration of existing home transactions would be significantly greater had we not intentionally made so many assumptions in the Company's favor.

Our program collected hundreds of thousands existing home transactions during the period. For many such existing home transactions, prices were also readily available, making price assumptions unnecessary. For other existing home transactions, however, price assumptions were necessary to estimate GTV. In **Appendix I**, we set forth a detailed explanation of our calculation showing that where assumptions were necessary, we made a point to make such assumptions in favor of the Company.

Despite such conservatism, the data nevertheless shows material exaggeration of GTV when compared with BEKE's claims. On a blended basis, we estimate that BEKE overstated its GTV from new and existing homes by approximately ~65% in Q2-Q3 2021, with the exaggeration especially pronounced in the critical new home category (~126% inflation). BEKE's exaggeration of new home sales on its platform has a disproportionate impact on its revenues.

¹⁵ Please see Appendix I for data collection methodology and results

We Conclude that BEKE Inflates Revenues by approximately ~77%-96%

Because BEKE's commission revenue is a function of its GTV, and principally BEKE's new home sales GTV, we conclude from our estimates that BEKE's revenues are significantly inflated, even at BEKE's reported commission rates. However, based on field work and agent interviews, we believe that BEKE's real commission rates are lower than claimed. Based on our macro work with the platform data and our field work spot checking commission rates, we estimate that **BEKE's revenues are inflated by approximately ~77%-96%**.

BEKE primarily generates revenues through commissions from the sale of new and existing homes through two channels of real estate brokerages: 1) BEKE's Company owned and operated Lianjia brand stores, and 2) brokerages that are not Company owned but sell homes through BEKE's platform (e.g. connected stores such as the Deyou franchise brand stores and other brokerage brands' stores).

Revenue recognition differs according to the accounting treatment of each category. Revenue is recognized on a **gross** basis for commissions for **new homes** sold by both BEKE's brokerage, Lianjia; and, connected brokerages including the Deyou franchise. Gross commission revenue is also recognized for sales of existing homes by Company owned brokerage, Lianjia.

By contrast, revenue is recognized on a **net** basis on the sales of existing homes by connected brokerages on BEKE's platform. BEKE collects a platform service fee of 8% of such commissions as well as smaller, miscellaneous fees.¹⁶

Table: Revenue recognition for different types of home sales

Type of stores	Relationship with BEKE	New Home Sales	Existing Home Sales
Lianjia	Subsidiaries	Gross	Gross
Connected stores	Users of BEKE platform	Gross	Net
Gross accounting	BEKE accounts 100% of commissions as BEKE's commission revenue		
Net accounting	BEKE accounts 8% of commissions as BEKE's commission revenue		

Because BEKE recognizes commission revenues on a gross basis for all new home sales (regardless of whether the brokerage is owned by BEKE or not), **new home sales on BEKE's platform are the primary driver of revenue growth**. This has also made BEKE's business vulnerable to a slowing property cycle, as beginning in Q3 2021, new and existing home sales in China stalled and residential property prices began declining.

Based on BEKE's reported home sales GTV and service revenues, BEKE's reported commission rates for new home sales were 2.79% in 2Q 2021 and 2.76% in 3Q 2021. The reported commission rates for Lianjia stores' existing home sales and connected stores' existing home sales were 2.75% and 0.32% in 2Q 2021 and 2.86% and 0.41% in 3Q 2021.

Reported commission rate	2Q 2021	3Q 2021	2Q-3Q 2021
New home sales by Lianjia and connected stores	2.79%	2.76%	2.77%
Existing home sales by Lianjia	2.75%	2.86%	2.79%
Existing home sales by connected stores	0.32%	0.41%	0.35%

Applying BEKE's reported commission rates to the GTV data collected from BEKE's platform, we calculate that BEKE's actual home transaction services revenues were only approximately RMB 23 billion in the past two quarters, suggesting ~77% revenue inflation. However, we believe that the actual revenue inflation is far greater.

¹⁶ The connected stores are the brokerage firms on the BEKE platform under the brands of Deyou and others except for Lianjia. BEKE gets 8% platform service fee from the commission earning by the other brands from the existing home sales.

BEKE Likely Inflated Its Home Sales Transaction Services Revenues (using reported commission rates)

RMB M	2Q 2021			3Q 2021			2Q - 3Q 2021		
	Reported	MW estimate	Inflated%	Reported	MW estimate	Inflated%	Reported	MW estimate	Inflated%
GTV of new home sales by Lianjia and connected	498,300	206,866	141%	410,100	195,358	110%	908,400	402,224	126%
Reported commission rate	2.79%	2.79%		2.76%	2.76%		2.77%	2.77%	
Rev from new home sales	13,900	5,770	141%	11,300	5,383	110%	25,200	11,153	126%
GTV of existing home sales by Lianjia	309,500	216,839	43%	185,300	160,866	15%	494,800	377,706	31%
Reported commission rate	2.75%	2.75%		2.86%	2.86%		2.79%	2.79%	
Rev from existing home sales by Lianjia	8,500	5,955	43%	5,300	4,601	15%	13,800	10,556	31%
GTV of existing home sales by connected stores	342,500	232,630	47%	192,900	164,791	17%	535,400	397,421	35%
Reported commission rate	0.32%	0.32%		0.41%	0.41%		0.35%	0.35%	
Rev from existing home sales by connected stores	1,100	747	47%	800	683	17%	1,900	1,431	33%
GTV of home sales	1,150,300	656,335	75%	788,300	521,015	51%	1,938,600	1,177,350	65%
Revenue from commission of home sales	23,500	12,473	88%	17,400	10,667	63%	40,900	23,140	77%

Source: BEKE's Public Filings, Data collected from BEKE's platform, MW calculation

Independent evidence and field work (including agent interviews) strongly suggests that BEKE's realized commission rates are meaningfully lower than the figures reported to investors.

A former Lianjia agent in Shenzhen published a tell-all blog in 2020, [revealing](#) that BEKE company policy was to go as low as 2% on commissions, despite official rates of 3%.¹⁷ The agent described the difficulty in securing clients when other agents from small, local brokerages would work for as little as 0.5%, and how other chain agencies could go as low as 1%.

Our field work corroborates such steep discounts. Different cities offer different standard rates. Investigators visiting BEKE brokerages were advised on several occasions by BEKE agents that they could drop the commission rates well below the official 3% rate.

For the nine cities where we conducted field work and discussed home purchases with Lianjia and connected store agents, the average discounted commission rate was close to 2%, with Sanhe Langfang at 2.4%, Beijing at 2.2%, five New Tier 1 cities and one second tier city at 2%, and Xiamen offering as low as 1.8% (down from 3.5%).¹⁸ We believe that customers who utilize more aggressive or stubborn negotiation tactics may be able to obtain even lower rates.

Commission Rate (%)	Standard	Buyer	Seller	After Discount	Effective Discount (%)
Beijing 北京	2.7	2.7	0	2.2	18.5%
Sanhe Langfang 三河廊坊	2.7	2.7	0	2.4	11.1%
Dalian 大连	3	1	2	2	33.3%
Qingdao 青岛	3	n/a	n/a	2	33.3%
Xiamen 厦门	3.5	2.5	1	1.8	48.6%
Guangzhou 广州	3	2	1	2	33.3%
Shenzhen 深圳	3	2	1	2	33.3%
Nanchang 南昌	2.5	1	1.5	2	20.0%
Hangzhou 杭州	3	1.5	1.5	2	33.3%

If commission rates are actually closer to 2.25%, we estimate that BEKE's revenues would likely be inflated by ~116%. However, in the following table, we calculate BEKE's revenues based on a 2.5% commission rate, which we think is

¹⁷ <https://zhuanlan.zhihu.com/p/142956970>, dating back to the period of its US IPO announcement

¹⁸ Conversations with Lianjia stores' and connected stores' agents

conservative. Even using such a conservative assumption, we estimate that BEKE's revenues are **likely inflated by ~96%**.

BEKE's Estimated Revenue Overstatement Would be 96% if Commission Rates were 2.5% (2Q-3Q 2021)

RMB M	MW estimate GTV	Commission %	MW estimate Rev.	Reported Rev.	Inflated%
New home sales by Lianjia and connected	402,224	2.50%	10,056	25,200	151%
Existing home sales by Lianjia	377,706	2.50%	9,443	13,800	46%
Existing home sales by connected stores	397,421	0.35%	1,410	1,900	35%
Total Home sales	1,177,350	1.8%	20,909	40,900	96%

Site visits uncovered another scheme to inflate commission rates. In the course of our investigation into Lianjia's operations, we found that Lianjia has also been franchising its brand, starting from at least 2017.¹⁹ We found that substantially all of Zhengzhou's Lianjia brand stores are franchises, not company owned and operated.²⁰ We also found what appear to be 24 Lianjia franchise stores in Shanghai.²¹ Although we suspect that undisclosed Lianjia franchise revenue is impermissibly booked as revenue from a Company-owned store, we did not deduct or adjust commission rates for such undisclosed franchised Lianjia stores in our calculation (in order to be favorable to the Company).

- **Field Work Indicates Commissions Inflated by Round Tripping Company Cash**

We also found evidence that the Company is round tripping cash to connected brokerages in order to artificially inflate commission revenues. When we sent investigators to Deyou stores, we learned that Deyou has what it calls a "pilot store program" wherein it offers certain Deyou franchise stores 10% of the store's assessed value in cash in exchange for a higher percentage of the store's commission revenues.²² These "investments" are off the books. More damningly, BEKE reportedly makes these payments in installments, which presumably makes it easier to match BEKE's outflows with the inflated commission inflows.

Below is a translated excerpt of a conversation between our investigator and a Deyou store manager:

Deyou manager: You are talking about our pilot program...it is difficult for newcomers to take part in.

Investigator: Hard to participate in?

Deyou manager: Yes. For new stores, because we have relatively high requirements for the pilot stores.

Investigator: What kind of future performance requirements have to be achieved?

Deyou manager: Under normal circumstances, for example, if your annual performance is more than 2.5 million, you are eligible, and someone will contact you.

Investigator: If one year's performance reaches Rmb 2.5 million, you can be eligible to participate.

Deyou manager: Yes.

¹⁹ https://www.sohu.com/a/194451125_99966714

²⁰ The data collected from BEKE's platform contains 198 Lianjia stores in Zhengzhou of which 193 provided working links to an image of their SAIC registration certificates. Yet none of these 194 stores are Lianjia or BEKE owned.

²¹ For example: 链家菊联路一店, 上海孚欣帝实业有限公司: <https://m.ke.com/store/37068800690225911184.html>, 高兴花园店, 上海金铭房地产经纪事务所: <https://m.ke.com/store/38005700720911812945.html>

²² 领航者

Investigator: So if participating [in the program] how much will the platform invest?

Deyou manager: The platform invests very little money. The platform only invests 10%. For example, the platform will invest 10% based on a valuation. The platform does not hold shares, and the investment does not account for shares, but the platform fee will increase a bit.

Investigator: Invest money without holding shares. That then would be...

Deyou manager: For example, if I value this store at 4 million, for example, I invest 10%, but it's not Rmb 400,000, right, I gave the Rmb 400,000 in batches. This is the first, and the second, we invest but I don't take shares, but your expenses will increase. For example, an increase of 1% point per year, that is the maximum number, of points that cannot be increased. Can you understand? For example, if you have 8 points this year, you may have 9 points next year.

Investigator: In other words, the platform fee charged by your platform will increase, but it will not receive shares.

Deyou manager: Yes.

Investigator: This is based on the valuation. How is the valuation calculated? In other words, is the valuation calculation based on the annual sales of my store or based on what, or the registered capital, or what?

Deyou manager: Generally speaking, the sales to the platform account are used to calculate the annual performance.

Investigator: That is equivalent to saying that the platform gives money. What do you mean it will not hold shares? It means that it will not own any shares?

Deyou manager: Yes. Will not participate in profit distributions.

Investigator: Not taking distributions.

Deyou manager: This is the pilot [program], this is for just select stores.

As described, Deyou would not take an equity stake or seek a profit distribution. Instead, it just increases its commission rates from 8% to 9%, which is a 12.5% increase. Since this process requires no recording of an investment stake with the SAIC, it would be difficult for investors to verify without field work. Additionally, as the “investment” is made in batches, the outflows will be smaller and smoother, creating less lumpiness in the balance sheet and cash flow statements. This seemingly creates a simple and tidy means for BEKE to round trip funds and boost its cash flows from commission revenues.²³

Based on these various interactions, we believe there is both a lower real commission rate earned, and a commission inflation scheme being carried out through these “pilot programs” and likely other schemes.

Ultimately, BEKE’s value proposition to investors is the GTV from transactions on its platform and related revenues. Yet our data collection from BEKE’s platform over the last few months causes us to conclude that the number of

²³ This does not refer to the Pontus investments in Deyou franchise stores which can be seen in the SAIC company registries. Furthermore, reviews of the Pontus Development HK operations also show systematic investments into the Deyou connected stores, normally taking a 10% equity stake. Our reviews of the SAIC records found over 400 as of Dec 31, 2020 instances of such investments. We believe the intent of these investments is similar to the “pilot” program, with the primary difference being that the “pilot program” does not require reporting changes in equity takes to the SAIC, allowing it to fly below the radar.

transactions and GTV are meaningfully much lower than the reported figure, and that the real commission rate earned from home sales is likely significantly lower than claimed. Even if we make the conservative assumption that commission rates are closer to 2.5%, we estimate that BEKE's revenues in 2Q and 3Q are **likely inflated by ~96%**.

Ghost Stores and Clone Stores: Field Work and Site Visits Show Inflated Store Count

Spot-checking BEKE's platform shows that even the platform overstates its store and agent count. To corroborate the data, we conducted field work and physical site visits, which showed a **pattern of ghost and clone stores: brokerages that existed only on the platform, but not in reality**. We believe that BEKE uses these ghost and clone stores to inflate its store count and related GTV and revenues.

a. Platform Data Indicates Material Store Count Inflation

As of June 30, 2021, BEKE claimed to have 52,868 stores, a 12% increase from 2020.²⁴



However, the actual number of stores collected from BEKE's platform undermines the Company's claims. Our data collection showed that as of July 16, 2021, the platform listed only 43,026 stores, suggesting that BEKE's 2Q21 store count was inflated by at least 23%.

Comparison of BEKE Claimed Store Number vs. BEKE's Own Platform Data

	# of stores
Number of stores reported by BEKE (2Q 2021)	52,868
Lianjia stores from collected data (as of 7/16/2021)	7,516
Connected stores from collected data (as of 7/16/2021)	35,510
Number of stores found on BEKE's platform	43,026
Inflated %	23%

The data shows that BEKE is exaggerating about its store count, but we think that this data collection vastly understates the true extent of BEKE's lie.

In 3Q21, BEKE introduced the 'active agent' and 'active stores' distinction to distinguish between active and inactive stores and agents on its platform.²⁵ In these disclosures, BEKE admits that at least 8% of the stores on its platform are 'inactive.' For a company that IPOed a little more than a year ago, this admission is jaw-dropping. We believe that BEKE recently introduced this metric to obscure discrepancies between BEKE's reported store count and the stores on its platform.

We investigated a sample of these 'active stores' listed on BEKE's platform. To no surprise, our field visits evidenced a multitude of **ghost stores masquerading as 'active stores' on the platform**, leading us to conclude that BEKE's actual store count is even lower than estimated from our data collection alone.

²⁴ BEKE 2Q 2021 Investor Presentation, p.3.

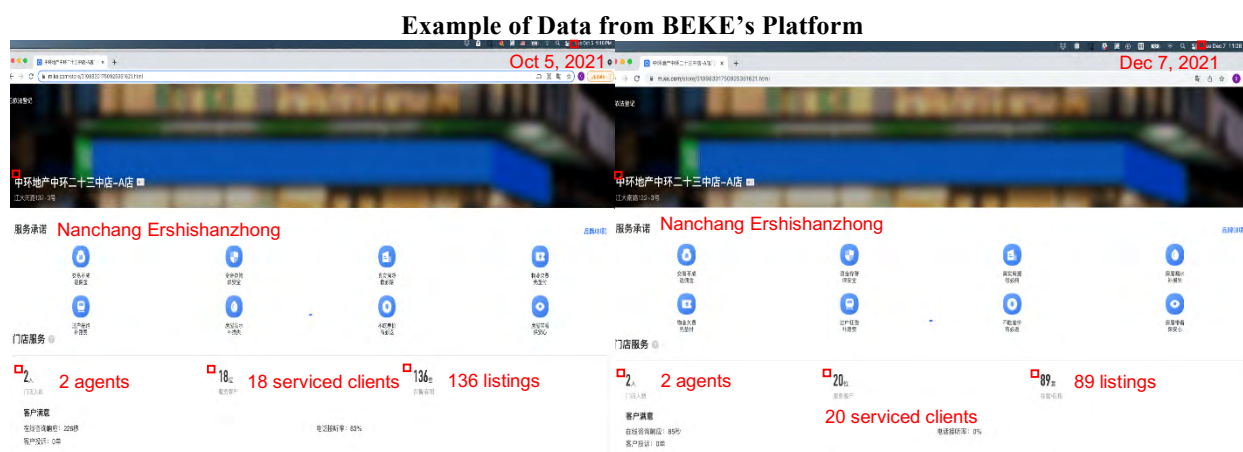
²⁵ BEKE's definition of active stores are stores that have had a transaction during the past 60 days, have had an agent visit during the past 14 days, or have simply had an agent take 'critical steps' in a housing transaction during the past 7 days. This is a very low bar for an agent to remain listed as "active" on the platform.

b. Ghost Stores Masquerading as ‘Active’ Stores on BEKE’s Platform

To spot check the data, our investigators visited seven cities that are important markets for either Lianjia, Deyou, or its recent acquisitions.²⁶ During these visits we noticed discrepancies in the names, addresses, locations of the stores in comparison with the information shown on the platform as well as in the SAIC registrations. In many locations, where we should have found thriving, active stores, we found the opposite. We subsequently evaluated the data collected on the platform and found copious discrepancies and missing stores that were still showing up as active. Below is a small sampling of our field work.

• Example Ghost Store 1: Nanchang Zhonghuan Nanchang Ershishanzhong

The Nanchang Zhonghuan Ershishanzhong store was shown to be ‘active’ on BEKE’s platform. In fact, data collected from the platform showed that BEKE was supposedly listing between 89-136 properties through this store over the prior three months.



Source: BEKE’s Platform

The store’s address listed on BEKE’s platform leads to a large apartment complex, while its SAIC certificate provides a more detailed address. When our investigator visited the store’s SAIC registered address, we found a derelict and abandoned store front located in a former gate guard’s room.²⁷ Our investigator found no further evidence of this location’s existence elsewhere. While two agents don’t require much space, we feel this abandoned guard’s room is not likely an active location.

²⁶ Field visits were made to seven cities. Beijing – a major market for Lianjia; Langfang – a suburb of Beijing which also has a lot of Lianjia and Deyou operations and which shows as having a high level of activity at each store, Shanghai – the second largest market for Lianjia; Nanchang – where Zhonghuan was founded, has its headquarters, and has the strongest activity levels (as per the BEKE platform data); Hangzhou – where Shengdu was founded and has its headquarters; Nanjing – where Shengdu has purportedly has strong operations; and Shenzhen – a real estate market hot spot in early 1H21. Contact was also made with BEKE’s Lianjia, Deyou, and other connected store agents and managers at many other Tier 1, New Tier 1, Tier 2 cities.

²⁷ Ershishanzhong Store has sales record of 1 new home and 1 rental from 5/25/2021 to 8/8/2021.

Nanchang Zhonghuan Ershishanzhong Store Registered Address



Source: Screenshot of SAIC Registration displayed on BEKE's platform and MW Investigator's Photo

- **Example Ghost Store 2: Nuojia Chengjia 9 Dragon Seal Flagship Store**

Listed on BEKE's platform, the Nuojia Chengjia 9 Dragon Seal Flagship Store appears to be 'active' with dynamic client and property counts during 3Q21 and 4Q21.²⁸

Nuojia Chengjia 9 Dragon Seal Flagship Store: 3Q Activity

Date	# of Existing Home Transactions	# of New Home Transactions	# of Rental Transactions
8/22/2021	1	1	19
9/7/2021	1	0	18
9/30/2021	1	0	18

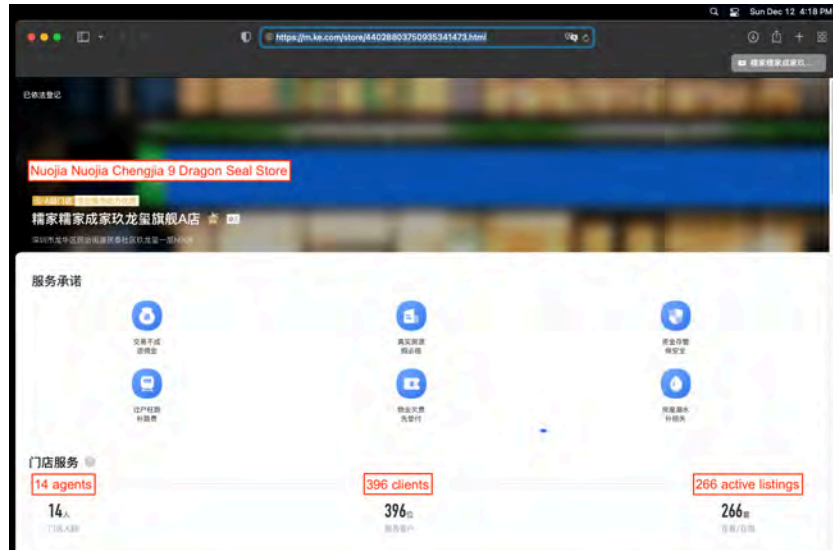
Source: Data collections from BEKE's platform

Nuojia Chengjia 9 Dragon Seal Flagship Store: 4Q Activity

Date	Agents	Serviced Clients	Listed Properties
10/3/21	24	361	273
10/27/21	23	376	350
12/2/21	14	396	272
12/12/21	14	396	266

Source: Web visits to BEKE's platform

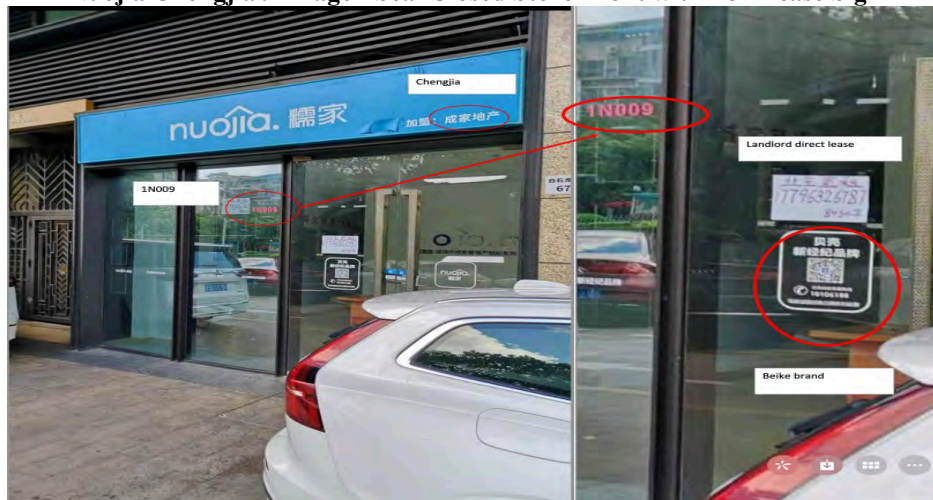
²⁸ <https://m.ke.com/store/44028803750935341473.html>



Above: Nuojia Chengjia 9 Dragon Seal page on BEKE's platform, visited on 12/12/2021

Our earliest data collection showed that the Nuojia 9 Dragon Seal store had 12 agents working in August 2021. We should have found an active store with between 14-24 agents and hundreds of properties advertised for sale. Instead, when our investigator visited this store at the address listed on the platform in September 2021, he found the store closed with a 'for lease' sign displayed.

Nuojia Chengjia 9 Dragon Seal Closed Store Front with For-Lease Sign



Source: MW Investigators Photo, Sept 2021

Our investigator then contacted a store agent to confirm the store address. The agent informed our investigator that the store moved to another store: Shuxiangmendi. However, this new store is listed on the platform as a separate store. In other words, the platform has two stores listed, including one that has been shut down.

• Example Ghost Store 3: Seven Colors Baichuan Store

BEKE's Seven Colors Baichuan Store provides another example of an apparently double-counted 'active' store.²⁹ According to BEKE's platform, this store had 4-8 agents, almost 200 clients and over 164 properties listed for sale or rent in the past three months. On paper, it appears to be a thriving brokerage and certainly an 'active store.'

²⁹ <https://m.ke.com/store/34098301750925361671.html>

But it doesn't exist. The address listed on its store page only contains the name of the road, no street number. We found the detailed address on its SAIC certificate. Our investigator went to visit this location in September 2021, finding a closed store front.³⁰

Ghost Store at Listed Address

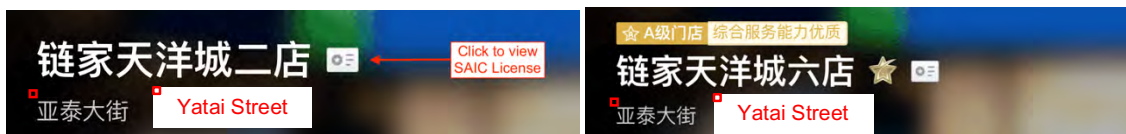


Source: MW Investigator's Photo

When a store agent was contacted to check the address, the agent confirmed she worked at Seven Colors Baichuan but gave the address of another store contained in BEKE's platform: Zhonghuan Youjia No. 3 Store (中环-佑家三)788 Bayuehu Road.³¹ Again, we find what appears to be a single location accounting for two active stores on BEKE's platform.

- **Example Ghost Store 4: Sanhe Langfang Lianjia Yanjiao Branch Stores 2 and 15 are the Same Store**

In another example, we found two Lianjia branches registered to the same street in the SAIC database. On BEKE's platform, Branch 2 and 15 are known as Tianyang Cheng No. 2 and Tianyang Cheng No. 6, respectively.



Sanhe Lianjia Branch No. 2³²
aka Tianyang Cheng No. 2

Sanhe Lianjia Branch No. 15³³
aka Tianyang Cheng No. 6

Source: BEKE Platform

Note: This information is confirmed by the SAIC business certificates provided on these two stores' pages.

Again, the addresses of these stores listed on BEKE's platform only have the street name but no street number, so we had to contact the stores' agents to get directions. However, when we spoke with the agents at these two stores, we were given identical locations for the branch: go to the intersection of Yatai Blvd. and Tianyang Cheng, look for Building No. 9, on the ground floor, next to the Commercial Bank. Following their instruction, we found only one Lianjia store at Building No. 9, on the ground floor, next to the Commercial Bank.

³⁰ 江西七彩色房地产经纪有限公司八月湖路分公司, aka: 七彩色地产七彩色百川店-A店,

<https://m.ke.com/store/34098301750925361671.html>

³¹ <https://m.ke.com/store/36078901750055761828.html>

³² <https://m.ke.com/store/18078900731505931670.html>

³³ <https://m.ke.com/store/13088500751985131610.html>

Branch Company Name	Registered Business Address & Location	BEKE Platform Store Name / Location	Physical Location
Sanhe City Lianjia Real Estate Brokerage Co, Yanjiao Branch No. 2	Yanjiao New High Tech Zone, Hanwang St. West Side, Guihua Rd, South Side, Tianyang Cheng, Hanfu Huating, Building No. 335, Unit 1, Shop-13	Tianyang Cheng No. 2 Store / Yatai Blvd.	Yatai Blvd., Tianyang Cheng, East Side of Construction Bank, Bldg 9, Ground Floor.
三河市链家房地产经纪有限公司燕郊第二分公司	燕郊高新区汉王路西侧、规划路南侧天洋城翰府华庭第335号楼1单元商铺-13	天洋城二店 / 亚泰大街	亚泰大街, 天洋城, 建行东侧, 九号楼底商.
Sanhe City Lianjia Real Estate Brokerage Co, Yanjiao Branch No. 15	Yanjiao Development Zone, Guihua Rd, North Side, Tianyang Cheng, Tianyang Square North District, Commerical Building No. 58	Tianyang Cheng No. 6 Store / Yatai Blvd.	Yatai Blvd., Tianyang Cheng, North District, Bldg 9, Ground Level Commercial Area, Construction Bank, Lianjia Real Estate
三河市链家房地产经纪有限公司燕郊第十五分公司	燕郊开发区规划路北侧天洋城天洋广场北区商业58号楼	天洋城六店 / 亚泰大街	亚泰大街, 天洋城, 北区九号楼底商处建设银行, 链家地产

Only one Lianjia Store was found following the directions



Source: Site Visits

We visited the store in the fall of 2021 and saw Branch No. 15's business registration hanging on the wall. An agent at the store confirmed that the local Tianyangcheng Store No 2 (Branch No. 2) was closed and had merged with Tianyangcheng Store No. 6 (Branch No. 15).

Agent: We have four stores. Previously, we had seven stores at the peak.

Researcher: Which store are you now?

Agent: We are Store No. 6

Agent: Because there was another store, but it was closed, now there is just store No. 1, No. 2 and No. 6.

Researcher: But I saw that Store No. 2 is also here.

Agent: Right. Store No. 2 used to be across the street. But when its lease was up, they closed the store and moved here.

These are clearly the same store. However, both stores appear separately on BEKE's platform.

Transaction data collected from BEKE's platform shows 22 transactions from Branch No. 2 and the 35 transactions from Branch No. 15 between May and October.³⁴ These impressive figures are significantly higher than other Lianjia stores in Langfang.

The collected data contains 32 Lianjia stores in Sanhe Langfang. Over the same a five-month period, the other Sanhe Langfang Lianjia stores had average an transaction per store volume of 15 during the same period. Since Branch No. 2 and No. 15 are actually one store, we consider their combined transaction volume when comparing to the average transaction volume per store for the remaining stores. The results show that the combined transaction volume at Branch

³⁴ May 25, 2021 to October 22, 2021

No. 2 and No. 15 is 159% higher than other Lianjia stores in Sanhe Langfang, which supports our belief that BEKE uses these **ghost stores** to inflate its transaction volumes.

5 Month Transaction Volumes Comparison

	# of Existing Homes	# of New Homes	# of Total Homes
Branch No. 2, Tianyang Cheng Store No. 2	21	1	22
Branch No. 15, Tianyang Cheng Store No. 6	31	4	35
Subtotal	52	5	57
Other 30 stores' average	19	3	22
Difference %	175%	63%	159%

In our research, we found that many stores that were recently closed or merged have not been de-platformed. These stores should show zero agents. However, in contrast, as of the middle of November 2020, both Branch No. 2 (Store No. 2) and Branch No. 15 (Store No. 6) continue to be presented as separate stores with active agents. BEKE's platform continues to display both branch stores with transactions and active agents, which supports our belief that BEKE is using ghost stores to inflate its transaction volumes as well as its active agent and store counts.



Source: BEKE's platform

Additionally, a side-by-side comparison of the agents at these two branches shows no overlap, again suggesting that these are two separate branch locations.

Lianjia Yanjiao Branch No 2 & 15 Agent List Comparison			
No.	Sanhe Lianjia Branch No. 2 (aka Tianyang Cheng No. 2)	No.	Sanhe Lianjia Branch No. 15 (aka Tianyang Cheng No. 6)
1	黄强, Huang Qiang	1	牛振兴, Niu Zhenxing
2	叶富国, Ye Fuguo	2	宋杰, Song Jie
3	方晓丽, Fang Xiaoli	3	刘松, Liu Song
4	周晓燕, Zhou Xiaoyan	4	周洪涛, Zhou Hongtao
5	董建存, Dong Jiancun	5	闫东伟, Yan Dongwei
6	王朝阳, Wang Chaoyang	6	刘义伟, Liu Yiwei
7	彭钊钊, Peng Shanshan	7	李静, Li Jing
8	金秋延, Jin Qiuyan	8	陈璐瑶, Chen Lu Yao
9	武佳豪, Wu Jiahao	9	苏青顺, Su Qingshun
10	于俊河, Yu Junhe	10	罗桂芳, Luo Guifang
11	卫福妮, Wei Funi	11	董佳宝, Dong Jiabao
12		12	张海涛, Zhang Haitao
13		13	邓闫, Deng Yan
14		14	孙旭, Sun Xu
15		15	蒋金龙, Jiang Jinlong
16		16	董利伟, Dong Li Wei

Source: Store information on BEKE platform, Nov 2021

c. Clone Stores

BEKE uses many techniques to inflate its store count, including **clone stores**, in which BEKE sets up multiple stores on its platform with the same or similar name and/or location but a different suffix, such A, B or C. Field work confirms that despite multiple stores appearing on BEKE's platform, often only one exists in practice. This pattern of clone stores is powerful evidence supporting our conclusion that there are far fewer stores than appear on BEKE's platform, meaning that BEKE's exaggeration of its store count is likely far more egregious than even the platform data suggests.

In seven cities surveyed, we found five cities with significant numbers of cloned Lianjia stores on BEKE's platform. Notably, we found that in Xiamen and Haikou, **41% and 32% of the Lianjia stores are clones**. Our research also found that 9% of Lianjia stores in Beijing are also clones. Not all stores on BEKE's platform show SAIC certificates or detailed addresses for us to verify, **so the actual number of clone stores might be even higher**. The table below shows the probable clone stores we identified in seven cities using the methodology described infra:

Table: Identified cloned Lianjia stores in 7 cities

	# of stores on BEKE's platform	# of clone stores	% of clone stores
	A	b	c=b/a
Xiamen	82	34	41.5%
Haikou	28	9	32.1%
Dalian	330	31	9.4%
Beijing	1,452	132	9.1%
Nanjing	277	19	6.9%

Source: Data collected from BEKE's Platform on November 30, 2021

BEKE's franchised brand Deyou labels its stores A and B based on the stores' performance and the number of agents each store has. Initially, we thought Lianjia's A/B/C stores designations followed a similar ranking system until a Lianjia agent told our investigator otherwise. According to BEKE's agent, these seemingly separate stores on BEKE's platform are located in the same store, purportedly under different managers.

For example, on BEKE's platform Lianjia Quanshuiwan Flagship A store and Quanshuiwan C store are shown as separate stores with a different number of agents, a different number of clients serviced, and a different number of listings. On BEKE's platform, these appear to be two separate stores.

Webpage of Lianjia Quanshuiwan Flagship A store: 18 agents, 1100 clients and 124 listing properties

链家泉水湾旗舰店A店

门店服务

18人 门店人数	1100位 服务客户	124套 在售/在租
-------------	---------------	---------------

客户满意
在线咨询响应: 62秒
客户投诉: 0单

电话接听率: 81%

Webpage of Lianjia Quanshuiwan Flagship C store: 15 agents, 150 clients and 163 listing properties

链家泉水湾旗舰店C店

服务承诺

15人 门店人数	150位 服务客户	163套 在售/在租
-------------	--------------	---------------

客户满意
在线咨询响应: 68秒
客户投诉: 0单

电话接听率: 88%

Yet when we contacted Quanshuiwan Flagship C store, an agent told us that the A store and the C store are the same store. The agent told our investigator that the reason the A and C stores were listed separately is because the store has two managers, and dividing the agents, listings and clients into two groupings under A and C makes it easier to keep track of the business of the respective managers operating out of the same store.

Conversation with An Agent Confirming A store and C store are the Same Store



MW: Why does the name show two stores? Are there A store, B store and C store?

Agent: Only A and C, but we are same. Is anything I can help?

MW: You are together in one location, why not one store?

Agent: You can understand it as one store with two groups.

MW: Are A store and C store one store?

Agent: Yes.

The agent confirmed that the letter designation of Lianjia stores on the platform represent the number of managers or teams that Lianjia has, not the actual store counts. Therefore, one store can easily turn into two, three or more stores on the platform.

For example, our data collection in Xiamen found 82 stores. 61 of these stores had designations suggesting that they were clones (such as ending with A, B or C), but they occupied only 27 locations. So, to estimate the number of clone stores, we simply subtracted the number of stores with such A/B/C designations (61) by the number of locations (27) to get a suspected 34 clone stores. Of the 82 stores in Xiamen, we therefore estimated that 41.5% were clones.

	# of stores on BEKE's platform	# of stores with clone designations (e.g. A, B, C)	# of locations with multiple clone stores	Estimated # of clone stores	% of fake stores
	a	B	c	d=b-c	e=d/a
Xiamen	82	61	27	34	41.5%
Haikou	28	5	2	9	32.1%
Dalian	330	62	31	31	9.4%
Beijing	1,452	256	124	132	9.1%
Nanjing	277	38	19	19	6.9%

Note: The cloned store are the stores in one location with the name of []A store, []B store, or []C store, etc.; or []No.1 store, []No.2 store, or []No.3 store, etc.

Using this methodology, we estimate that at least 9.1% of the stores listed on BEKE's platform in its key market of Beijing are clone stores. In Xiamen and Haikou, we estimate that **41.5%** and **32.1%** of the stores are clones in those cities.

We spot checked this analysis by searching on Baidu Maps. In instances of clone stores, we can see that there is only one store listed on the map with the store name, but we don't see any B or C stores. This further corroborates our finding that Lianjia has large number of fake stores that appear active on the platform but do not exist.

The data collected from BEKE's platform shows that the A store usually shows all the detailed information including address and business license, but the B or C stores do not. This is likely why approximately 30% of the stores listed on the platform do not have complete store information and/or a verifiable business license.

Throughout the period of our research, we also noticed that store names were frequently changing, and many stores did not display a correct and/or specific address, instead giving a vague, highly simplified general location or an incorrect location.

Ultimately, the frequency of clone stores in major markets implies that there are far fewer stores in reality than we observed on BEKE's platform, meaning that BEKE's store count inflation is more egregious than we calculated from the platform data alone.

d. The Sanhe Langfang Case Study: SAIC Store Count Inflated by 59%

We found that Lianjia store numbers in BEKE's SEC filings generally align with the number of Lianjia stores registered in a given city's SAIC. However, as our field work across China revealed, there were many stores with active SAIC registrations that did not exist. This suggests that branch store registrations were being created on paper and filed with the local SAIC's, but no physical operation was being maintained.

To investigate these store count discrepancies further we decided to conduct field work in one city, Sanhe Langfang, to focus on the Company owned Lianjia brokerages. We compared SAIC data, readily available online through TianYanCha or QiChaCha, with the results of physical site visits.

Sanhe Langfang is a satellite city of Beijing located within the Hebei province.³⁵ We chose this city for a deep dive because BEKE purports to be strong in and around Beijing, and the Company supposedly maintains a significant number of Lianjia brokerages in the area. The Sanhe Langfang Lianjia stores displayed very high numbers of transactions per store, so we expected to find a high degree of activity.

The SAIC data shows 51 Lianjia stores located in Sanhe Langfang.³⁶ Yet when we tried visit these locations, we were only able to confirm the existence of 32, observing non-existent stores, double counted stores, and stores that appeared to be entirely different brands – including BEKE's connected Deyou brand.

Of the 51 Lianjia stores we should have found in Langfang, **19 were ghost stores**. In this city alone, site visits and field work indicate that BEKE overstated the store count by 59% by keeping branch SAIC registrations current while not actually stores. We believe that Sanhe Langfang is representative of the Company's web of lies, and that such **ghost stores are endemic**.

- **Example: 7 SAIC Lianjia registrations in same area, but found only 2 and 1 was closed**

In the Langfang SAIC data, we found seven Lianjia stores registered on the same street with near identical addresses. All seven of which were established at the same time with the same legal representative.³⁷ We visited the street to verify the existence of these stores but found only one store: Sanhe Lianjia Yanjiao Branch No. 53 ("Branch No. 53")

³⁵ 三河市廊坊市,河北

³⁶ Chinese company information database

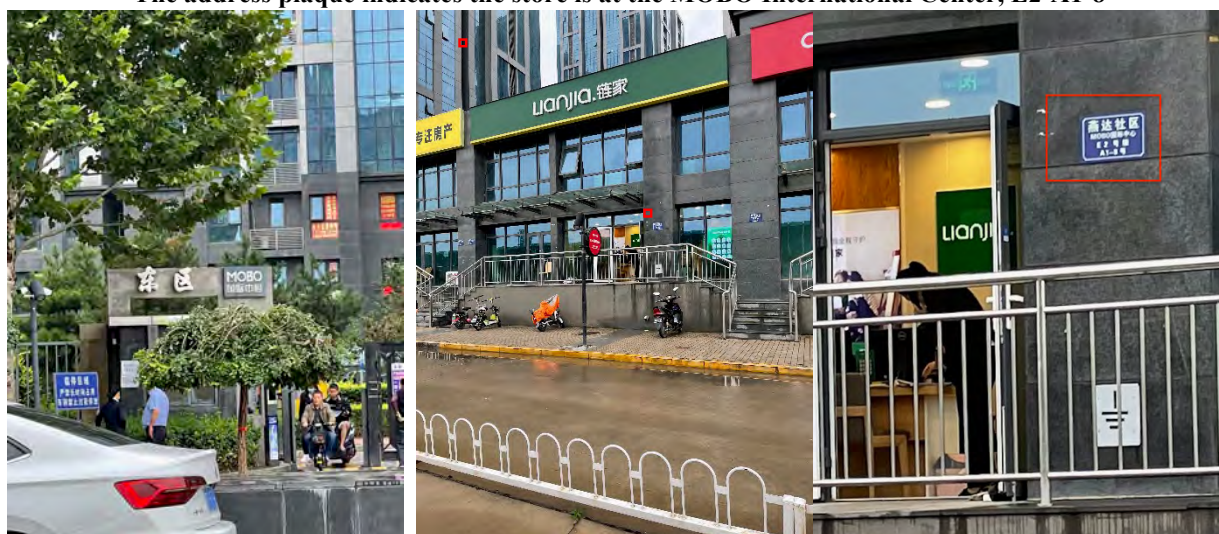
³⁷ Chinese company information database. These stores were established on either May 25 or May 26 of 2017, with Song Xinghua 宋兴华 as their legal representative.

in suite A1-8. To confirm our findings, we spoke with an agent at the operating Lianjia store. The agent confirmed that there was indeed only one Lianjia store on the street.

Branch Company Name	Registered Business Address & Location	BEKE Platform Store Name	Physical Location
Sanhe City Lianjia Real Estate Brokerage Co, Yanjiao Branch No. 53	Yanjiao New High Tech Zone, Yanhsun Rd., East Side, S. Mizhou Branch Line; ShouErYuan TianCheng, Phase 1, District E, Building 1, 1st Floor, Unit 1, Suite A1-8	SouErTianCheng #2 Store	Yes (Sharing address A1-9 with No. 54)
三河市链家房地产经纪有限公司燕郊第五十三分公司	燕郊高新区燕顺路东侧、密涿支线南侧首尔园甜城一期E区一期第1幢1单元1层A1-8	首尔甜城二店	
Sanhe City Lianjia Real Estate Brokerage Co, Yanjiao Branch No. 54	Yanjiao New High Tech Zone, Yanhsun Rd., East Side, S. Mizhou Branch Line; ShouErYuan TianCheng, Phase 1, District E, Building 1, 1st Floor, Unit 1, Suite A19	None	Sharing address A1-9 with No. 53
三河市链家房地产经纪有限公司燕郊第五十四分公司	燕郊高新区燕顺路东侧、密涿支线南侧首尔园甜城一期E区一期第1幢1单元1层A19		
Sanhe City Lianjia Real Estate Brokerage Co, Yanjiao Branch No. 55	Yanjiao New High Tech Zone, Yanhsun Rd., East Side, S. Mizhou Branch Line; ShouErYuan TianCheng, Phase 1, District E, Building 7, 1st Floor, Unit 1, Suite A2-7	None	No
三河市链家房地产经纪有限公司燕郊第五十五分公司	燕郊高新区燕顺路东侧、密涿支线南侧首尔园甜城一期E区一期第7幢1单元1层A2-7		
Sanhe City Lianjia Real Estate Brokerage Co, Yanjiao Branch No. 56	Yanjiao New High Tech Zone, Yanhsun Rd., East Side, S. Mizhou Branch Line; ShouErYuan TianCheng, Phase 1, District E, Building 7, 1st Floor, Unit 1, Suite A2-6	None	No
三河市链家房地产经纪有限公司燕郊第五十六分公司	燕郊高新区燕顺路东侧、密涿支线南侧首尔园甜城一期E区一期第7幢1单元1层A2-6		
Sanhe City Lianjia Real Estate Brokerage Co, Yanjiao Branch No. 57	Yanjiao New High Tech Zone, Yanhsun Rd., East Side, S. Mizhou Branch Line; ShouErYuan TianCheng, Phase 1, District E, Building 9, 1st Floor, Unit 1, Suite A2-33	None	No
三河市链家房地产经纪有限公司燕郊第五十七分公司	燕郊高新区燕顺路东侧、密涿支线南侧首尔园甜城一期E区一期第9幢1单元1层A2-33		
Sanhe City Lianjia Real Estate Brokerage Co, Yanjiao Branch No. 58	Yanjiao New High Tech Zone, Yanhsun Rd., East Side, S. Mizhou Branch Line; ShouErYuan TianCheng, Phase 1, District E, Building 9, 1st Floor, Unit 1, Suite A2-34	Closed	No
三河市链家房地产经纪有限公司燕郊第五十八分公司	燕郊高新区燕顺路东侧、密涿支线南侧首尔园甜城一期E区一期第9幢1单元1层A2-34		
Sanhe City Lianjia Real Estate Brokerage Co, Yanjiao Branch No. 59	Yanjiao New High Tech Zone, Yanhsun Rd., East Side, S. Mizhou Branch Line; ShouErYuan TianCheng, Phase 1, District E, Building 9, 1st Floor, Unit 1, Suite A2-35	None	No
三河市链家房地产经纪有限公司燕郊第五十九分公司	燕郊高新区燕顺路东侧、密涿支线南侧首尔园甜城一期E区一期第9幢1单元1层A2-35		

When comparing the data of the confirmed store with the SAIC data, we observed further discrepancies. The only unique store of the seven observed, Branch No. 53, is located at E2-A1-8 of the MOBO apartment complex.

The address plaque indicates the store is at the MOBO International Center, E2-A1-8

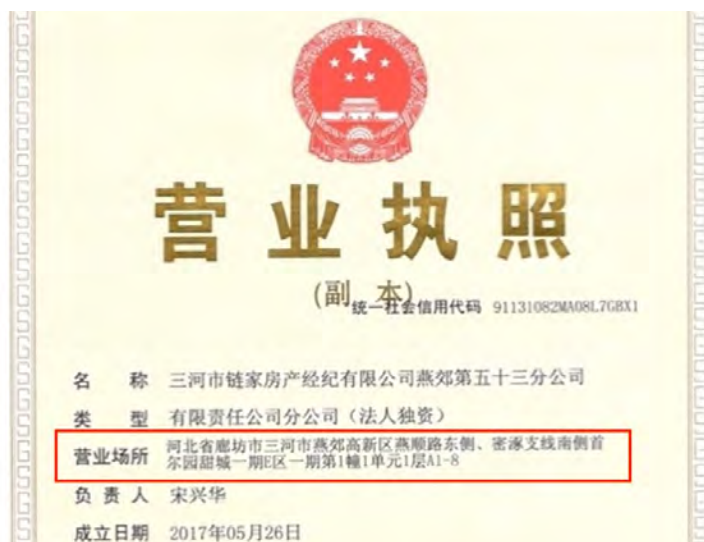


Source: Site Visits



Source: BEKE's Platform

However, the store has a different address listed in its SAIC business license certificate. The accompanying SAIC business license provided to the store page shows Branch No. 53 is registered in District E, building 1, 1st Floor, Unit 1, Suite A1-8, which should be E1-A1-8 and not E2-A1-8 as listed elsewhere.



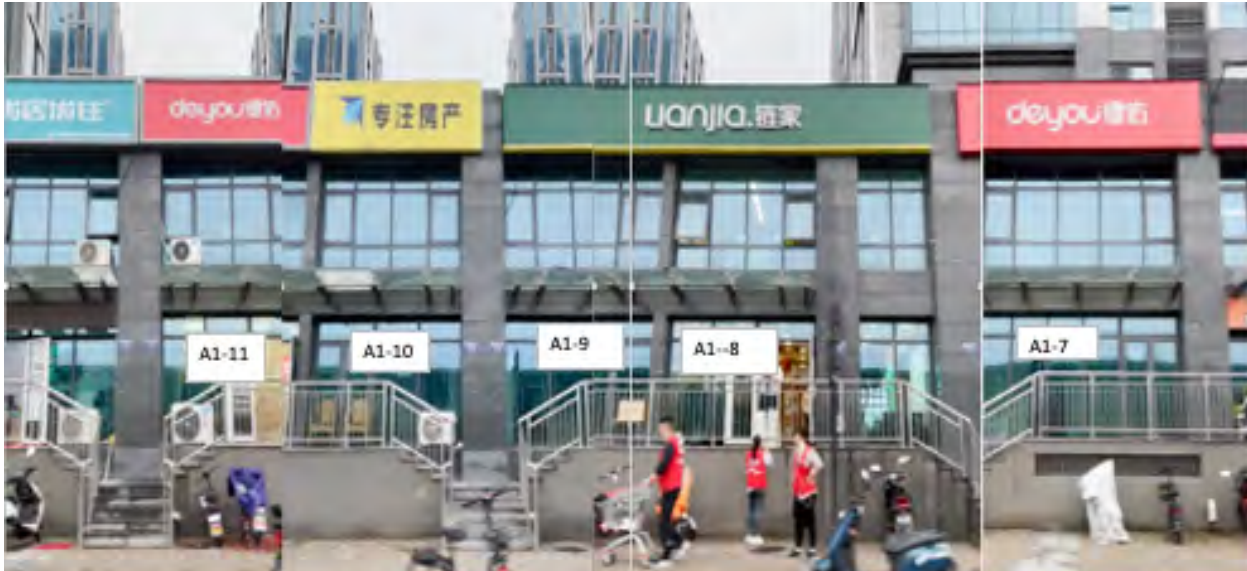
Source: BEKE's Platform

We believe that BEKE intentionally creates inconsistencies such as these to misrepresent its actual store counts. But that is not the only trick we observed in our field work.

Two of the seven Lianjia stores in question are registered side by side, Branch No. 53 in unit A1-8 and Branch No. 54 in unit A1-9. The same single store occupies these two addresses and shows up in the SAIC records as two different locations, but in reality, these are a single store.

³⁸ <https://m.ke.com/store/18090400891701434975.html>, 链家首尔甜城二店, 三河市燕郊开发区燕顺路首尔甜城 MOBO 公寓北面底商 E2-A1-8

Lianjia Shouertiancheng No. 2 (aka Branch 53, A1-8 & 54, A1-9) bookended by 2 Deyou stores



Source: Site Visits

All of these branches also filed for their annual reports with SAIC in the past four years and have active current registrations.

There was one Lianjia store where we should have found seven. We believe BEKE uses these SAIC listed non-physical locations as “ghost stores” as false support for its SEC store counts.

The use of similar but different store names and the extremely vague store location descriptions and addresses is a common theme on BEKE’s platform. For instance, we observed **two branches registered to the same street address in the SAIC database**. When we visited, we only found one store. Branches 10 and 79 are co-located but presented as distinct and different stores on BEKE’s platform with different store numbers, different branch numbers, and different SAIC business registrations.

When visited the store, we saw SAIC business license displayed on the wall was for Branch No. 79. However, on the opposite wall, both Branch No. 10’s and Branch No. 79’s award banners were presented. The agent at the store stated that Branch No. 10 (Store No. 2) was closed and had merged with Branch 79 (Store No. 4).

However, like the example of Branch No. 2 (Tianyang Cheng No. 2) and No. 15 (Tianyang Cheng No. 6) above, both stores also displayed active transactions even after one was closed and the two seemingly merged. In our collected data from May 25 to Oct 22, we found that Branch No. 10 displayed 13 exiting home and 2 new home transactions and Branch No. 79 showed 27 existing home and 2 new home transactions, combining to produce a total of 44 home sales.



Above left: The business registration certificate displayed for Lianjia Yanjiao Branch No. 79
 Above right: Sales Award Banners for both Store 4 (Branch 79) and Store 2 (Branch 10) hanging in same store

Another store simply didn't exist. Branch 51 is registered at Zhugedian Village in Yanjiao Town. Yet when we visited the site, we could not find any Lianjia or other real estate brokerage to speak of.

Branch Company Name		Registered Business Address & Location			BEKE Platform Store Name	Physical Location
Sanhe City Lianjia Real Estate Brokerage Co, Yanjiao Branch No. 51		Yanjiao Village, Zhuge Commercial Town			None	No
三河市链家房地产经纪有限公司燕郊第五十一分公司		燕郊镇诸葛店村				

SAIC Registration Information for the SanHe City Lianjia Real Estate Brokerage Co, Yanjiao Branches									
51	12-Jun-17	SONG Xinghua 宋兴华	133-1561-8352, 563284618@qq.com	On file, operating	On file, operating	On file, operating	On file, operation closed	Active	No

No Lianjia Store at the Zhugedian Village



Source: Site Visits, Q4 2021

In another example, Branches 4 and 88 are registered on the same street, only two stores away. When we visited, we only found one Lianjia store (Branch 88). The location where Branch 4 should be is actually a restaurant.

No Branch No. 4 But a Restaurant Xiang Gu Li



Source: Site Visits, Q4 2021

BEKE presents its store count as having a linear relationship with GTV and revenues. Like the latter categories, our data collection of BEKE's platform showed massive exaggeration of BEKE's store count. Yet this even likely overstates the true extent of the misrepresentation, as our field work found many examples of ghost and clone stores which were listed as 'active' on BEKE's platform and existed on paper, but not in reality.

In Appendix II, we include more information from our investigation of Langfang, including supplemental details and photos pertaining to the pattern of ghost stores observed in the examples provided here as well as additional examples.

Multiple Independent Data Points Show Massive Agent Overstatement

BEKE's is a multivariate fraud, with layers of deception metastasizing throughout its business and representations to investors. Although our data collection indicates that BEKE's reported agent count is at least 26% inflated, much like the store count, field work and independent evidence from government real estate registries suggest that the agent count is more significantly exaggerated to investors.

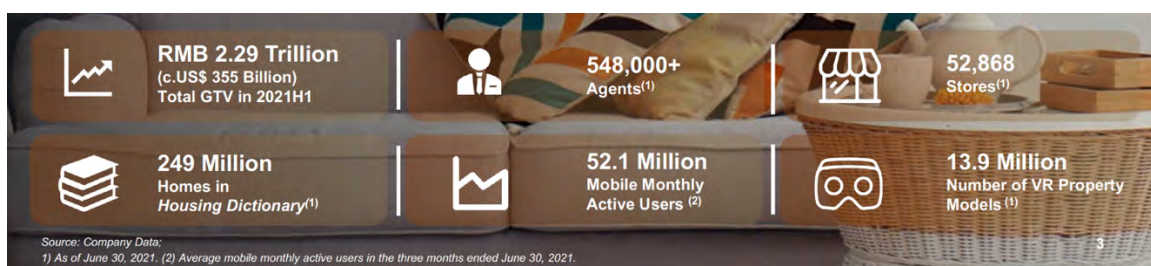
Home sales on BEKE's platform are a function of the number of agents using its platform. Clearly, the more agents on the platform, the more home sales closed and recorded through the platform, and the larger the Company's GTV and related revenues.

This link between agent growth and GTV and revenue growth is an important pillar of the narrative supporting BEKE's stock price.

Yet data we collected from BEKE's platform reveals that like GTV and revenues, BEKE is significantly exaggerating the number of agents on its platform. We corroborated this collected data with SAIC data and local government real estate registries, which independently indicate that BEKE significantly overstates the number of agents on its platform to US investors. This is an important part of the thesis, as it tracks the exaggeration of GTV, stores and revenues.

a. Platform Data Indicates Agent Count Significantly Overstated

BEKE claimed to have 548,000 agents as of June 2021, an 11% increase from 2020.³⁹



However, the actual number of agents on BEKE's platform contradicts this reported figure. We used a program to collect the number of agents listed on the Company's platform as of July 16, 2021. Our program used the Find Agent function to locate the agents.⁴⁰

The collection was conducted on July 16, two weeks after the end of the second quarter. Our collection detected only 435,888 agents, suggesting BEKE inflated its agent count by approximately 26%.

Comparison of BEKE Claimed Agent Number vs. BEKE Platform Data

	# of Agents
Number of agents reported by BEKE (2Q 2021)	548,000
Number of Lianjia agents from collected data (as of 7/16/2021)	115,940
Number of Connected stores agents from collected data(as of 7/16/2021)	319,948
Total agents on BEKE's platform (as of 7/16/2021)	435,888
Difference	(112,112)
Inflated %	26%

³⁹ BEKE 2Q 2021 Investor Presentation, p.3.

⁴⁰ BEKE 2020 20-F, pp. 54-57, Since BEKE's ACN is designed to help manage transactions and keep track of sales and most importantly the division of commissions, and is replete with procedures and rules, as well as performance and service scoring, we believe that all agents and stores are highly incentivized, if not required, to be on the platform.

It is possible that BEKE is worried that its inflated agent count will be discovered. Similar to its stores, in BEKE's 3Q21 earnings press release, the Company introduced new metrics of 'active agents' and 'active stores' on its platform.⁴¹

Rather than this being an acknowledgement of the number of inactive agents on BEKE's platform, we think it is a thinly veiled attempt to preempt concerns about the discrepancy between BEKE's claims and reality.

Despite this ruse, even if we count the 'active' agents, we still observe a substantial discrepancy between the number of 'active' agents reported by BEKE and the number of agents on its platform. In other words, our platform data likely overcounts the number of agents working for the Company. **Spot checking reveals that the overstatement is likely much greater.**

b. Local Government Real Estate Website Corroborates Exaggerated Agent Count

In order to determine whether BEKE was overstating the number of agents on its platform, we compared a local real estate license registry against the detailed disclosures provided by BEKE in connection with a recent acquisition.

As a protection against unscrupulous real estate agents, the city of Nanchang in Jiangxi Province provides a quantitative score and ranking for all agents, tracking good and bad behaviors with 100 points (5 stars) being the highest ranking.⁴²

These scores are listed in Nanchang City's Real Estate Broker Credit Registry (the "Registry"). Agents with scores below 60 are entered onto a blacklist and their brokerage credentials are cancelled.⁴³ The [Registry](#) is public and searchable.⁴⁴ Local authorities confirmed that the Registry is updated frequently and that the registry is so current, displaying whether an agent is still with an agency, or if they have resigned or have been blacklisted.

⁴¹ https://www.sec.gov/Archives/edgar/data/0001809587/000110465921135986/tm2132196d2_ex99-1.htm

⁴² http://www.xinhuanet.com/local/2018-08/03/c_1123219937.htm

⁴³ 南昌市房地产经纪从业人员信用行为管理规定, <http://house.ncfdc.com.cn/News/newsbody.html?id=137485>

⁴⁴ 南昌经纪从业人员信用档案公示, <http://m.ncfdc.com.cn/BrokerCreditFiles>

The screenshot displays the 'Public announcement of credit files of Nanchang brokerage practitioners' website. It features a search bar at the top and a list of brokers. The 'Zhonghuan Real Estate' broker is highlighted in red. The list includes the following brokers:

Broker Name	Rating	Contact Number
易康健	7	18279556554
刘永健	7	13657093299
刘震宇	7	18779115302
刘玉亮	4	13767022062
Yi Kangjian	7	18279556554
Liu Yongjian	7	13657093299

In 2019, BEKE acquired a real estate brokerage called Zhonghuan. Our collection of data from BEKE's platform found that in late August 2021, Zhonghuan's Nanchang operation had 363 stores with 2,050 agents.

We [checked](#) these numbers against the Nanchang Registry. The results showed that although the reported store count closely matched, the number of Zhonghuan agents was exaggerated by 50%.

Zhonghuan's operation in Nanchang	# of Stores	# of Agents
BEKE platform	363	2,050
Nanchang Real Estate Bureau Registry	360	1,307
Inflated %	1%	50%

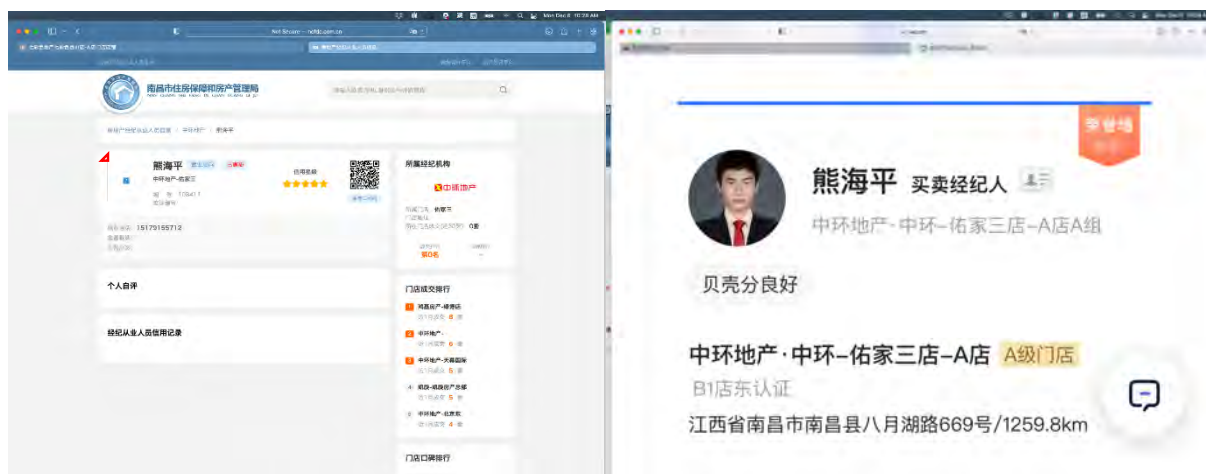
Source: [Nanchang Housing Security and Real Estate Administration database](#),
Data collected from BEKE platform

We believe that BEKE uses former agents who have left the Company to inflate the agent count on its platform. For example, according to BEKE's platform, Zhonghuan Youjia No. 3 store supposedly has 12 agents.⁴⁵

⁴⁵ As of December 10, 2021 [中环地产中环-佑家三店-A店门店店铺 \(ke.com\)](#)



Yet when we compared the listed agents at Zhonghuan Youjia No. 3 and the Registry, we found three agents had already left Zhonghuan.⁴⁶



Our collected data indicates that there are far fewer agents on BEKE's platform than it reports to investors. But the Nanchang registry implies that the number of active agents is substantially less than the number of agents on the platform, likely because the registry is scrubbed far more often for real estate agents who drop out of the business or leave the Company.

We corroborated this conclusion with other data sources, including SAIC data, which confirm that BEKE's agent count is materially overstated.⁴⁷

⁴⁶ The three agents' information on BEKE's platform: <https://m.ke.com/bj/jingjiren/1000001005193156>, <https://m.ke.com/bj/jingjiren/1000001009464580>, <https://m.ke.com/bj/jingjiren/1000001000714187>

⁴⁷ SAIC data is from QiChaCha.

c. SAIC Data in BEKE's Leading Markets Show Overstated Agent Count

Beijing and Shanghai are BEKE's two primary markets. The Company claimed that these two cities contributed 32% of revenue in 2020, and that Lianjia had 21,000 agents in Shanghai and 27,000 agents in Beijing as of Dec 31, 2020.⁴⁸

In China, companies are required to pay the contribution to social insurance for all employees.⁴⁹ Chinese companies are required to report the number of employees to SAIC. A simple check of the SAIC data for BEKE's subsidiaries imply that the Company is materially inflating its agent count in these key markets.

i. Shanghai: SAIC Data in BEKE's Largest Market Show 100%+ Overstatement in Agent Count

In BEKE's latest 20-F, the Company claimed it had Lianjia 21,000 agents in Shanghai as of FYE 2020. In the 20-F, BEKE lists only two subsidiaries in Shanghai: Deyou Real Estate Agency Co., Ltd. ("Deyou Agency") and its subsidiary, Shanghai Deyou Property Consulting Co., Ltd. ("Shanghai Deyou").⁵⁰

When we spot-checked the Company's claims with the annual SAIC data for its Shanghai subsidiaries from database providers QiChaCha and QiXinBao, these entities reported only 9,996 employees registered.

Shanghai Deyou: 1,310 employees

统一社会信用代码	913101203013562464	企业名称	上海德佑物业顾问有限公司		
法定代表人	 徐向东 关联46家企业 >	登记状态	存续 (在营、开业、在册)	成立日期	2014-04-15
注册资本	5000万元人民币	实缴资本	100万元人民币	核准日期	2017-06-28
组织机构代码	30135624-6	工商注册号	310120002324030	纳税人识别号	913101203013562464
企业类型	其他有限责任公司	营业期限	2014-04-15 至 2044-04-14	纳税人资质	-
所属行业	房地产业	所属地区	上海市	登记机关	奉贤区市场监管局
人员规模	1000-1999人	参保人数	1310	曾用名	-
英文名	-	进出口企业代码	-		
注册地址	上海市奉贤区南桥镇环城南路753号 附近企业				
经营范围	物业管理, 房地产经纪, 房地产咨询, 电子商务 (不得从事增值电信、金融业务)。【依法须经批准的项目, 经相关部门批准后方可开展经营活动】				

Source: QCC (database of SAIC registration information)

⁴⁸ BEKE 2020 20-F, p. 60: "As of December 31, 2020, Lianjia had approximately 27,000 and 21,000 agents, as well as approximately 1,400 and 1,000 brokerage stores, in Beijing and Shanghai, respectively."

⁴⁹ BEKE 2020 20-F, p. 29. BEKE claimed that certain of our PRC subsidiaries and consolidated affiliated entities have failed to make social insurance and housing fund contributions in full for their employees. Yet we think the difference is too big to be explained by this excuse.

⁵⁰ BEKE F-1, dated July 24, 2020, p. F-15; BEKE F-1, dated Nov 16, 2020, p. F-112; BEKE 2020 20-F, p. F-11, and public SAIC corporate registry databases such as QiChaCha, QiXinBao

Deyou Real Estate Agency: 8,686 employees

统一社会信用代码	91310120742692413Q	企业名称	德佑房地产经纪有限公司		
法定代表人	 王翊群 关联141家企业>	登记状态	存续（在营、开业、在册）	成立日期	2002-09-04
注册资本	5000万元人民币	实缴资本	5000万元人民币	核准日期	2021-02-19
组织机构代码	74269241-3	工商注册号	310120001430814	纳税人识别号	91310120742692413Q
企业类型	有限责任公司（非自然人投资或控股的法人独资）	营业期限	2002-09-04 至 2032-09-03	纳税人资质	-
所属行业	房地产业	所属地区	上海市	登记机关	奉贤区市场监督管理局
人员规模	8000-8999人	参保人数	8686	曾用名	上海德佑房地产经纪有限公司
英文名	Deyou Real Estate Brokerage Co., Ltd.	进出口企业代码	-		

Source: QCC (database of SAIC registration information)

We learned that BEKE is registering some Shanghai employees who have hukous in other cities in its Shenzhen entities. However, BEKE claimed 21,000 agents in Shanghai, while SAIC data for its two Shanghai brokerage subsidiaries show only 9,996 employees and 199 employees in its other subsidiaries (including its VIE). In our opinion, this legally dubious maneuver is unlikely to account for much of the delta because of the potential to attract negative attention and the implication that so little of its agent base is from Shanghai.

Shanghai Agent Overstatement: SAIC Data vs. Claimed

2020	# of Employees w/ Social Insurance
德佑房地产经纪有限公司 Deyou Agency*	8,686
上海德佑物业顾问有限公司 Shanghai Deyou*	1,310
上海高策房地产经纪有限公司	2
上海链家房地产经纪有限公司	0
上海闹海房地产经纪有限公司	0
上海德融房地产经纪有限公司	0
Brokerage and related business subtotal	9,998
上海方毓网络科技有限公司	21
度有文化传播（上海）有限公司	0
贝壳技术有限公司上海分公司	171
上海识切信息科技有限公司	0
上海链鲤技术有限公司	6
上海小宅信息技术有限公司	0
上海小桁网络科技有限公司	1
上海海鑫科技有限公司	0
上海晨海贝网络科技有限公司	0
Other business subtotal	199
Total	10,197
Claimed # of agents in Shanghai	21,000
Inflated %	106%

*Disclosed in the BEKE SEC filings

We think even this metric likely understates the extent of BEKE's misrepresentations. The employee count reported in the SAIC data of BEKE's Shanghai subsidiaries should include a number of employees who are not agents. This means that of the 10,197 employees reported in the SAIC data, a portion should be non-agent support staff such as secretaries and internal accountants.

We contacted six Shanghai Lianjia stores who told our investigator that Lianjia stores do not employ part-time or temporary agents and that Lianjia pays social insurance for its employees. This means that the employee count on the SAIC data should generally match the agent count reported by the Company in its SEC filings. It doesn't and it is not even close.

We see the same pattern when we compare BEKE's disclosures with independent records from the Company's other key market, Beijing.

ii. Beijing: SAIC Data Shows over 100% Overstatement in Agent Count

BEKE claimed that it had 27,000 agents in Beijing as of Dec 31, 2020.⁵¹ Beijing is also the corporate headquarters for the company, so in addition to agents and its support staff, "a large portion of employees" are based in Beijing working in administration and other office functions.⁵²

D. Employees

We had a total of 119,658 employees as of December 31, 2020. The following table sets forth the numbers of our employees categorized by function as of December 31, 2020.

Function	Number of Employees
Agents and supporting staff	91,210
Platform operations	12,316
Research and development	3,420
Business development, sales and marketing	5,042
Administration and management	7,670
Total	119,658

As of December 31, 2020, our employees were mainly based in mainland China. A large portion of our employees are based in Beijing where our headquarters is located, and the rest are mainly at our subsidiaries and branches across the nation.

We reviewed BEKE's IPO and secondary F-1 prospectuses, its 2020 20-F and the public SAIC corporate registry databases to map out the structure and identify companies that might be significant employers in Beijing. We found that in Beijing, BEKE has 28 major and minor subsidiaries (including VIEs).⁵³ These entities reported a total of only 14,236 employees per SAIC data, indicating that BEKE is exaggerating the number of its agent in Beijing by 90%.

⁵¹ BEKE 2020 20-F, p. 60: "As of December 31, 2020, Lianjia had approximately 27,000 and 21,000 agents, as well as approximately 1,400 and 1,000 brokerage stores, in Beijing and Shanghai, respectively."

⁵² BEKE 2020 20-F, p. 130

⁵³ BEKE F-1, dated July 24, 2020, p. F-15; BEKE F-1, dated Nov 16, 2020, p. F-112; BEKE 2020 20-F, p. F-11, and public SAIC corporate registry databases such as QiChaCha, QiXinBao. Note, in the most recent filing, the 2020 20-F shows fewer "major subsidiaries" than in its F-1 prospectuses.

BEKE's SAIC Data Indicate the Number Its Agents in Beijing are 90% Inflated

Company	# of Employees*	Company	# of Employees*
贝壳找房科技有限公司北京分公司	1	北京丁丁优房科技信息有限公司	0
北京链家高策房地产经纪有限公司 **	1,801	万科链家（北京）装饰有限公司	72
北京美宸信息咨询有限公司	232	北京贝好商务咨询有限公司	0
贝壳找房网（北京）信息技术有限公司	0	北京伊诺万链商务服务有限公司	0
北京房江湖科技有限公司	2	北京理房通支付科技有限公司 **	142
北京方源房地产咨询服务有限公司 **	330	北京宜居泰和科技有限公司 **	9
北京佰诚合信房地产经纪有限公司	0	北京中融信融资担保有限公司 **	277
北京高策房地产经纪有限公司	54	北京全装美家装饰有限公司	273
北京链家房地产经纪有限公司 **	169	北京致经联同科技有限公司	1
贝壳找房（北京）科技有限公司 **	4,218	贝易拍（北京）拍卖有限公司	1
北京链家置地房地产经纪有限公司 **	6,304	北京信富咨询有限公司	0
北京贝壳家居科技有限公司	0	北京链家融信投资咨询有限公司	0
德佑（天津）房地产经纪服务有限公司北京分公司	103	Other business subtotal	1,022
Brokerage and related business subtotal	13,214	Total	14,236
北京链家融盛管理咨询有限公司	85	Claimed # of agents in Beijing	27,000
北京链家旅居科技服务有限公司	161	Inflated %	90%
北京贝嘉商务咨询有限公司	1	*# of employees w/ social insurance reported in 2020	

** Disclosed in the BEKE SEC filings

Again, such figures likely understate the true extent of BEKE's misrepresentations, as SAIC data includes a number of non-agent employees, particularly given that BEKE's headquarters are in Beijing.

It is clear that GTV and revenues are a function of the number of agents BEKE employs, meaning that such agent overstatement tracks closely with other independent data points showing GTV and revenue exaggeration.

- Labor dispatching and outsourcing agencies may legally only make up 10% of the employees**

The evidence is clear that BEKE is materially inflating its agent count. The discrepancy cannot be accounted for by labor dispatching and outsourcing agencies. BEKE's own SEC disclosures state that PRC labor laws limit the number of dispatched and temporary laborers to 10% of the total labor force.⁵⁴

Labor Dispatch

Pursuant to the Labor Law of the PRC and Interim Provisions on Labor Dispatch, which was promulgated on 24 January 2014 and became effective on 1 March 2014, labor dispatch employment is a supplemental form which can only be adopted for temporary, auxiliary or alternative job positions. Temporary positions are positions subsisting for no more than nine months; auxiliary positions are positions of non-major business serving for major businesses; and alternative positions are positions that can be held by dispatched laborers for a certain period of time during which the former laborers are temporarily out of their positions for reasons. An employer is required to strictly control the number of dispatched laborers not to exceed 10% of the total number of its labor force.

⁵⁴ BEKE 2020 20F, p. 78

Even assuming 10% of the labor force is temporary workers, the maximum allowed under PRC law, SAIC data still indicate that BEKE inflates the number of agents in its key Beijing and Shanghai markets by ~79%.

Labor Dispatching Would Not Explain the Discrepancy

	Shanghai	Beijing	Total
# of employees in 2020 SAIC data	10,197	12,920	24,433
Labor dispatching limit 10%	10%	10%	10%
	11,217	14,212	26,876
# of agents claimed in SEC filings	21,000	27,000	48,000
Inflated %	87%	72%	79%

Source: BEKE SEC filings and its subsidiaries' SAIC filings

BEKE's conflicting disclosures also support this assumption. BEKE reports the breakdown of its employee count by function in its SEC filings. Even if we assume that all the dispatched workers are agents, adding them together with the number of agents reported in the function breakdown section still leaves BEKE far short of the agents necessary for its headline agent claims to be true.

	6/30/2020	9/30/2020	12/31/2020
# of agents claimed	134,000	133,000	139,000
Reported agents and supporting staff	64,543	89,217	91,210
Reported dispatched workers	9,495	8,217	11,966
Max # of agents	74,038	97,434	103,176
Inflated %	81%	37%	35%

Source: BEKE's Public Filings

Pursuant to PRC labor laws, temporary employees may only constitute a maximum of 10% of the full-time employee count. BEKE confirmed in its SEC filings that it did not exceed this 10% threshold mandated by Chinese law. Accordingly, even assuming all of the temporary agents were agents, the number is still far short of BEKE's headline agent count. We believe the explanation is clear. Revenue and GTV are a function of agent count, so to justify its fabricated GTV and revenue figures, BEKE has also significantly inflated the number of agents on its platform to pump its stock price.

- Inconsistent SEC Disclosures - Additional Evidence of Agent Overstatement**

We observed discrepancies not only between its SEC filings and local Chinese regulatory filings, but also between the figures reported in BEKE's SEC filings from period to period. Even in its SEC filings, the number of employees fluctuates widely, suggesting, in our opinion, that the Company has trouble keeping its story straight regarding the number of its employees and its agents.

For example, in its initial F-1 filed in April 2020, BEKE stated that as of Dec 31, 2019, it employed 82,282 direct employees and 76,217 dispatched workers, which was 93% of its full-time employee. If true, this would be an admission of violation of PRC labor laws.

Employees

■ We had a total of 82,282 employees as December 31, 2019. The following table sets forth the numbers of our employees categorized by function as of December 31, 2019.

Function	Number of Employees
Agents and supporting staff	60,248
Platform operations	8,598
Research and development	3,043
Business development, sales and marketing	4,325
Administration and management	6,068
Total	82,282

■ In addition to our own employees, our labor force also includes dispatched workers. ■ As of December 31, 2019, we had 76,217 dispatched workers. We have implemented a comprehensive plan to reduce the percentage of dispatched workers. As of the date of this prospectus, the number of our dispatched workers does not exceed 10% of our total labor force. See also "Risk Factors — Enforcement of stricter labor laws and regulations and increases in labor costs in the PRC may materially and adversely affect our business and our profitability".

Source: [BEKE F-1 filed on April 25, 2020](#), p. 169

The SEC questioned BEKE about this matter. In June 2020, the Company replied that it had lowered the percentage of dispatched workers to less than 10%. BEKE claimed that, as of April 30, 2020, the number of its full-time employees increased 82% within four months after implementing a comprehensive plan to presumably gain compliance with PRC labor law.⁵⁵

However, two months later, the self-reported figures fluctuated significantly again, when BEKE claimed that the number of its full-time employees decreased 41% to 87,706 and the number of dispatched workers was 9,495.

Employees

■ We had a total of 87,706 employees as of June 30, 2020. The following table sets forth the numbers of our employees categorized by function as of June 30, 2020.

Function	Number of Employees
Agents and supporting staff	64,543
Platform operations	9,200
Research and development	3,080
Business development, sales and marketing	4,193
Administration and management	6,690
Total	87,706

In addition to our own employees, our labor force also includes dispatched workers. Historically, we had a relatively large number of dispatched workers. In 2020, we have initiated and implemented a comprehensive plan, including making more direct employment and outsourcing arrangements, to lower the percentage of dispatched workers without any material impact upon our labor demands. ■ As of June 30, 2020, the total number of our dispatched workers was 9,495, which was below 10% of our total labor force of 97,201, and we do not expect the reduction in the percentage of dispatched workers to have any material impact on

Source: [BEKE F-1/A, August 12, 2020](#)

BEKE's reported full-time employee count is available almost every quarter in 2020, and these figures swing drastically every quarter. In practice, we believe that companies rarely go through the hassle to hire full-time employees, fire them, and recruit new workers on a quarterly basis. Yet according to BEKE's SEC disclosures, the number of full time and temporary employees and agents gyrated massively from quarter to quarter.

After the IPO and secondary offerings closed, BEKE appears to have returned to its old ways, reporting that as of Dec 31, 2020, it had 139,000 agents in total, but only 91,210 employees who were agents and support staff on its payroll.⁵⁶

⁵⁵ https://www.sec.gov/Archives/edgar/data/0001809587/000091205720000178/filename1.htm#ei75901_regulation

⁵⁶ BEKE 2020 20-F, p.60

As of December 31, 2020, *Lianjia* had approximately 139,000 agents, including agents employed by us and from labor dispatching or outsourcing agencies, and approximately 7,800 offline brokerage stores across 29 cities in China. As of December 31, 2020, *Lianjia* had approximately 27,000 and 21,000 agents, as well as approximately 1,400 and 1,000 brokerage stores, in Beijing and Shanghai, respectively.

Source: BEKE 2020, 20-F, p .60

D. Employees

We had a total of 119,658 employees as of December 31, 2020. The following table sets forth the numbers of our employees categorized by function as of December 31, 2020.

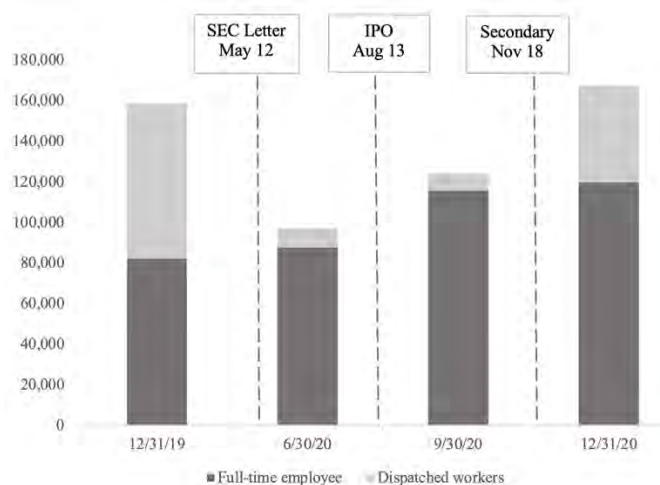
Function	Number of Employees
Agents and supporting staff	91,210
Platform operations	12,316
Research and development	3,420
Business development, sales and marketing	5,042
Administration and management	7,670
Total	119,658

As of December 31, 2020, our employees were mainly based in mainland China. A large portion of our employees are based in Beijing where our headquarters is located, and the rest are mainly at our subsidiaries and branches across the nation.

Source: BEKE 2020, 20-F, p .130

The difference between the 139,000 Lianjia agents reported and the 91,210 employed directly by BEKE suggests that at least 47,790 agents were employed through outsourcing agencies.⁵⁷ This suggests that the growth in the total agents in of the end of 2020, 28.5% of its labor force were either coming from labor dispatching agencies, or were simply invented.⁵⁸

BEKE's Reported Agent Composition Change



⁵⁷ Unlike prior quarters disclosures, the 47,790 number of dispatched workers was not disclosed; however, it can be calculated from the difference between the total number of Lianjia employees reported and the total number of agents who are either Lianjia employees or employed via dispatched labor services companies.

⁵⁸ BEKE 2020, 20-F, pp., 60, 130

Lianjia Agents, Employees, and Dispatched Workers

	12/31/20	
Number of Lianjia agents including BEKE employees and dispatched workers	139,000	a
Agents and support staff	91,210	b
Full-time employee	119,658	c
Dispatched workers	47,790	d=a-b
Total labor force	167,448	e=d+c
% of dispatched workers to total labor force	28.5%	f=d/e

One further piece of corroborating evidence emerged unexpectedly during a store visit. One of our investigators approached a Deyou brokerage as a potential buyer of a property. The agent suggested that our investigator temporarily become a Deyou employee to take advantage of the real estate agent employee discount on the sales price offered by the developer. To do so, the agent would upload the buyer's name, government identification number (身份证号), and cell phone number onto the BEKE platform. The agent said that as soon as the home purchase was complete, our investigator could just resign. This unorthodox offer suggests that the number of agents on BEKE's platform could be inflated by buyers disguised as employees.

In our opinion, the dramatic inconsistency in BEKE's disclosed employee count from quarter to quarter in its SEC filings corroborates the evidence we found in the data collection of BEKE's platform and the SAIC data of its primary subsidiaries, all of which show that BEKE lies about the number of agents on its platform to mislead investors regarding the scale of its business, its GTV and revenues.

If BEKE is misleading investors with fake revenues, GTV, stores and agents, how does it account for the fake cash produced by such fraud on its balance sheet?

Likely Acquisition Fraud to Mask Fake Revenues

One of the hallmarks of US-listed Chinese companies that have collapsed amid evidence of fraud is the use of sham transactions to burn off non-existent cash balances. Typically, the company overstates the value of an acquired asset, sometimes secretly purchased from proxies connected to insiders. In our research on BEKE, we found an example that we think is a textbook sham transaction.

In addition, we question how BEKE could have spent its claimed RMB 7.2 billion (US\$1.1 billion) on R&D since 2018.⁵⁹ This also seems to be an overstatement.

BEKE R&D Expense		
Period	R&D Expense	Source
3Q21	¥ 1,043	3Q21 6-K financial report, p.6
2Q21	¥ 775	2Q21 6-K financial report, p.6
1Q21	¥ 638	1Q21 6-K financial report, p.6
2020	¥ 2,478	2020 20-F, p.100
2019	¥ 1,571	2021 20-F, p.103
2018	¥ 671	2022 20-F, p.103
Total Rmb mm	¥ 7,176	
Total US\$ mm	\$ 1,114	3Q2 6-K financial report, p.9 (Rmb 6.4434:US\$1)

- **Zhonghuan: Sham Transaction Routed through Straw Entity controlled by Likely Company Proxy**

BEKE claims that it spent RMB 1.8 billion to acquire 100% of Zhonghuan Real Estate Agency (“Zhonghuan”) in a two-part transaction supposedly completed in 2020. However, SAIC data shows that BEKE routed the transaction through a likely straw buyer controlled by a Company proxy. Straw buyers controlled by management proxies are a common way in our experience to overstate asset purchases prices.

In its prospectus, BEKE claimed that the Company acquired 100% of Zhonghuan in a two-legged transaction. First, the Company claimed that it paid RMB 931 million for 62% of Zhonghuan on July 12, 2019. Second, BEKE claimed to have paid RMB 910 million for the remaining 38% in April 2020.⁶⁰ The table below shows BEKE’s claims.

BEKE’s Purported Timelines and Valuation for the Zhonghuan Acquisition						
RMB M	Date	Ownership %	Consideration	Cash	Shares	Valuation
Phase 1	7/12/2019	62%	931	931	0	1,502
Phase 2	Apr 2020	38%	910	194	716	2,395

However, SAIC data contradicts BEKE’s disclosures. Regarding the first leg of the transaction, instead of acquiring 62% of Zhonghuan in July, 2019, BEKE only acquired 28%.⁶¹

On the same day, another entity, Tianjin Yunju Real Estate Agency (“Yunju”), acquired 33.6% of Zhonghuan. Within six months, Yunju flipped its newly acquired 33.6% ownership to BEKE, and not long after deregistered.

⁵⁹ BEKE 3Q21 6-K financial report, p.6,9; BEKE 2Q21 6-K financial report, p.6; BEKE 1, Q21 6-K financial report, p.6; 2020 20-F, pp.100,103

⁶⁰ [BEKE F-1, p. F-84 ~ F-86](#)

⁶¹ SAIC Company Information Database

统一社会信用代码	91120116MA06PEA00G	企业名称	天津云居房地产经纪有限公司
法定代表人	 夏京盛 关联17家企业 >	登记状态	注销 Deregistered
注册资本	21500万元人民币	实缴资本	-
组织机构代码	MA06PEA0-0	工商注册号	-
企业类型	有限责任公司 (法人独资)	营业期限	2019-05-27 至 2049-05-26
所属行业	房地产业	所属地区	天津市
人员规模	-	参保人数	0 趋势图 >
英文名	Tianjin Yunju Real Estate Agency Co., Ltd. (自动翻译 纠错)	成立日期	2019-05-27 Date of incorporation: May 27, 2019
		核准日期	2021-09-01
		纳税人识别号	91120116MA06PEA00G
		纳税人资质	-
		登记机关	天津市滨海新区市场监督管理局
		曾用名	-
		进出口企业代码	-

Above: Tianjin Yunju's basic SAIC data including data of establishment and deregistration

序号	变更日期	变更项目	变更前	变更后
6	2019-12-30	投资人(股权)变更	投资人:Shibi Limited,出资额:1708.9944万人民币,占18.7089%,出资方式:货币,出资时间:2018-06-22 投资人:Zhumei Limited,出资额:99.69万人民币,占1.0913%,出资方式:货币,出资时间:2018-06-22 投资人:Mingke Limited,出资额:1656.4004万人民币,占18.1332%,出资方式:货币,出资时间:2018-06-22 投资人:Smart Linkage(HK)Co.,Limited,出资额:2602.9672万人民币,占28.4956%,出资方式:货币,出资时间:2018-06-22【退出】 投资人:天津云居房地产经纪有限公司,出资额:3066.588万人民币,占33.571%,出资方式:货币,出资时间:2018-06-22【退出】	投资人:Shibi Limited,出资额:1708.9944万人民币,占18.7089%,出资方式:货币,出资时间:2018-06-22 投资人:Zhumei Limited,出资额:99.69万人民币,占1.0913%,出资方式:货币,出资时间:2018-06-22 投资人:Mingke Limited,出资额:1656.4004万人民币,占18.1332%,出资方式:货币,出资时间:2018-06-22 投资人:Pontus Development (Hong Kong) Limited,出资额:5669.5552万人民币,占62.0665%,出资方式:货币,出资时间:2018-06-22【新增】

Above: SAIC data re the acquisition and consolidation of shares in Zhonghuan by BEKE via Pontus HK on 12/30/21

Evidence indicates that this intermediary was likely a straw buyer controlled by a Company proxy. First, SAIC data shows that the intermediary was incorporated only six weeks before it acquired a substantial share interest in the target. We infer that the purpose of the entity was to hold the interest for a short period before selling to BEKE.

The intermediary also appears to be controlled by an individual closely connected to BEKE. The intermediary (Yunju) was owned by Liu Xiaojun (99%) and Xia Jingsheng (1%). Liu appears to have close ties to BEKE.

企查查 Qcc.com		天津云居房地产经纪有限公司		查一下	VIP会员	企业套餐	应用
序号	受益所有人名称	最终受益股份	受益类型	任职类型			
1	 刘晓军 作为受益所有人64家企业 >	99% 股权	直接或间接持股, 实际控制人	-			
2	 夏京盛 作为受益所有人6家企业 >	1% 股权	法定代表人/负责人, 关键管理人员	法定代表人, 经理, 执行董事			

The “inextricable connection” between BEKE and Liu Xiaojun was covered by the Chinese media.⁶² For example, Liu Xiaojun used to be the supervisor of Yantai Lianjia Real Estate Brokerage,⁶³ a subsidiary of BEKE, and owns a

⁶² <https://www.36kr.com/p/1724208054273>, “...刘晓军却与链家存在着千丝万缕的联系”

⁶³ Until May 2018. (Chinese company information database)

company called Beijing Beike Real Estate Consulting. Liu is also the ultimate owner of Beijing Fangjianghu Info Tech⁶⁴, which uses @lianjia.com email for corporate registration and shares the same phone number with multiple BEKE subsidiaries.

At BEKE's reported purchase price, BEKE supposedly paid RMB 504 million (to an obvious proxy) for this acquisition. Put simply, rather than buying Zhonghuan outright, BEKE routed the purchase through a highly suspect intermediary. Formed just weeks before the transaction, we think the purpose of the entity was to fraudulently inflate the original purchase price. After holding the target's shares for a mere six months, it then flipped them to BEKE.

In our view, inserting a straw buyer likely enables BEKE a convenient mechanism to fake cash that is a byproduct of significantly overstating revenues.⁶⁵

Additional evidence also indicates that BEKE significantly inflated the value of the acquisition. In two transactions in 2017 and 2019, BEKE acquired a partial interest in IFM, the Century 21 brand network of franchise brokerages in China. BEKE valued its 37.6% equity interest in IFM and loan to IFM's controlling shareholder at a fair value of RMB 225.4 million at the end of 2019.⁶⁶ This gave an implied valuation of RMB 599 million to IFM. Notably, BEKE subsequently wrote down RMB 317 million of the IFM investment.⁶⁷

We believe IFM is a good benchmark to value Zhonghuan because both are franchise operations acquired by the Company, so we can compare the relative valuation of each business with the data on transactions and stores collected from the platform.

Looking at BEKE platform data, we see that IFM brokerages produce significantly more new and existing home sales, have almost double the number of agents, and more than 40% more stores than Zhonghuan.

⁶⁴ 北京房江湖信息科技有限公司

⁶⁵ This transaction has many similarities with the Shunshun and DFRL investments discussed in our TAL report.

⁶⁶ <https://www.sec.gov/Archives/edgar/data/1809587/000110465920091904/filename1.htm>

⁶⁷ <https://www.sec.gov/Archives/edgar/data/1809587/000110465920091904/filename1.htm>

Pursuant to ASC 825-10-15-4, the Company elected the fair value option to account for all of its investments in IFM and the loan provided to IFM's controlling shareholder above. The fair value of the additional investment in IFM and the loan to IFM's controlling shareholder was RMB120.1 million on the transaction date, which was supported by independent valuer's valuation report. The difference of RMB317.9 million between the consideration paid and the fair value of financial assets received was recognized as deemed marketing expenses, amounting to RMB274.8 million and RMB43.1 million when the payments were made in May and November 2019, respectively, for the following reasons:

The Company invested heavily to promote the *Beike* platform after its launch in 2018, including online and offline advertising efforts. In 2019, the Company launched many incentive programs to incentivize real estate brokerage firms to join its platform. By making this investment, the Company received marketing related benefits as IFM agreed to be the first large brokerage firm joining the *Beike* platform. It has an effect similar to a corner stone business partner that will bring confidence to other potential smaller brokerage firms for them to trust the Company and join the *Beike* platform. The fact that IFM joined the platform helped to enhance the brand awareness of *Beike* and strengthen the Company's market position.

There is no minimum transactions or traffic committed by IFM to be brought to *Beike* platform as IFM does not directly provide those services to the Company, nor does the cooperation with IFM include any favorable terms. Therefore the business cooperation with IFM did not qualify as an identifiable intangible asset. Moreover, the Company's platform revenue directly generated from IFM was only about RMB6.9 million in 2019, which is immaterial and provides evidence that the payment to IFM is not to give a price concession to IFM as a customer of the Company's platform service.

The Company concluded the business rationale to pay the premium is to enhance and promote the *Beike* platform. Hence, the difference between the consideration paid and the fair value of the investments and the loan should be recognized as a marketing expense. In response to the Staff's comment, the Company has revised the disclosure on page 107 of the Registration Statement to provide

Comparative Value of IFM and Zhonghuan by Store, Agent, and Transaction

Brand Name	# of Stores	# of Agents	Number of Transactions from May 25, 2021 to Aug 8, 2021			
			Existing Home Sales	New Home Sales	Total Transactions	
21 Century - IFM	2,876	24,872	8,395	6,254	14,649	a
Zhonghuan	1,991	13,414	4,488	5,209	9,697	b
Difference	885	11,458	3,907	1,045	4,952	a-b
Difference %	44%	85%	87%	20%	51%	a/b-1

On both an EV/transaction basis or an EV/store basis, BEKE paid nearly 4x for Zhonghuan. We believe this underscores the absurdity of the price paid for Zhonghuan.

Zhonghuan Valuation Premium

Brand Name	# of Stores	# of Agents	# of Transactions	Implied Equity Value (RMB mm) as of Dec 31, 2019	Zhonghuan Valuation Premium
21 Century - IFM	2,876	24,872	14,649	599	
Zhonghuan	1,991	13,414	9,697	1,841	
Zhonghuan Valuation - Adjusted on Equity Value/ # of Store Basis				415	3.4x
Zhonghuan Valuation - Adjusted on Equity Value/ # of Agents Basis				323	4.7x
Zhonghuan Valuation - Adjusted on Equity Value/ # of Transactions Basis				397	3.6x
Zhonghuan Valuation - Adjusted Average				378	3.9x

It also notable that whereas BEKE wrote down the value of IFM (through a deemed marketing expense), BEKE wrote up the value of Zhonghuan.

Ultimately, we think the evidence shows that BEKE inflated the purchase price of the Zhonghuan acquisition to route the acquisition through a likely Company proxy and burn off phantom cash.

• Shengdu: Absurd Acquisition Price

Another suspicious acquisition merits scrutiny. BEKE claims that the Company spent RMB 8 billion⁶⁸ to acquire Shengdu Home Renovation (“Shengdu”), a home renovation service provider. Yet Shengdu only operates in several provinces with many of its branches setup in 2021.

As a basis of comparison, Dong Yi Ri Sheng Decoration Group (2713.CH) (“Dong Yi”), is a publicly listed renovation service provider. Dong Yi operates in 30 provinces and cities. Its enterprise value in June 2021, around the time of BEKE’s acquisition announcement, was RMB 2.5 billion.

In an expert network forum interview, a former BEKE senior manager responsible for the online home sales business discussed his view of the Shengdu acquisition, opining that it was “not a very smart move.”

“Personally, I think the company think that it is very natural that people want to get a home renovation. If they bought a home, especially if they bought a secondary housing, they want someone to help them to do with their renovation. But in my opinion, it is a very — like what I said, this industry, the home renovation, the way of acquiring a company like Shengdu is not a very smart move.”

“What's more important is that, for the home renovation, you do not have this kind of network effect like what you have with brokerage companies. With the brokerage companies, the more agents that you have, you have a better chance of getting a much bigger market share than a smaller one. But for home renovations, you do not have this kind of network effect. Even if you are 10 times bigger, or even 100 times bigger, than your competitor, it is highly unlikely that you can take market share from the small competitor.

⁶⁸ BEKE did not disclose the exact amount, but only stated that the purchase price would be capped at RMB 8 billion.

The ones who are making some real difference is the companies that invested in, for instance, new ways of doing home renovation. I came across some of the startups or some of the companies in China. They are doing something different. For instance, they will offer a total solution to your home renovation, with different materials and different ways of doing home renovation, which is quite different from that of Shengdu. Shengdu is a service provider. It does not have this kind of technology. I'm pretty negative about this acquisition."

We question why BEKE would pay RMB 8 billion to acquire a home renovation business in a limited number of provinces. Our suspicion is that like Zhonghuan, BEKE grossly overpaid for a questionable business in order to hide fake cash, a balance sheet problem created by BEKE's gross overstatement of its revenues.

Appendix I: Data Collection Methodology and Results

BEKE's online platform has a large volume of data flowing through it. The platform contains key data points on the number of stores and transactions for new and existing homes, what the company refers to as its Agent Cooperation Network (ACN). Platform data is available for external customers to view. We created an automated program to collect the publicly available data on BEKE's platform for the sale of new and existing homes through the Company owned brokerage (Lianjia) and connected store brokerages.

We discussed the platform and data with BEKE agents and confirmed that this data mirrors the company's internal back-end data, showing the same transaction data that company agents see with two main differences:

- No buyer or seller personal information is made public
- There is a roughly two-week delay between a contract signing and the posting of new transactions. The agents explained that this 14–17-day delay is intended to prevent the poaching of sales, listings, and customers by other agents.⁶⁹

We conducted multiple data collections from the platform. The key data point that we collected was the number of transactions at the store level. BEKE's platform collections frequently provided numerous other data points such as the total number of new and existing home transactions on the platform for the trailing 76-day period, the number of agents and stores on the platform, plus details on the transactions. The collections from the store pages also provided the store name, address, link to its SAIC business registration, number of agents, etc.

Lookback Period	Number of Transactions	
	Existing Homes	New Homes
May 25, 2021 – August 8, 2021	145,220	112,747
June 9, 2021 – August 23, 2021	127,803	106,727
June 30, 2021 – September 13, 2021	118,728	99,756
August 8, 2021 – October 22, 2021	94,877	107,994
September 1, 2021- Nov 15, 2021	96,068	118,207

The collection process worked as follows.

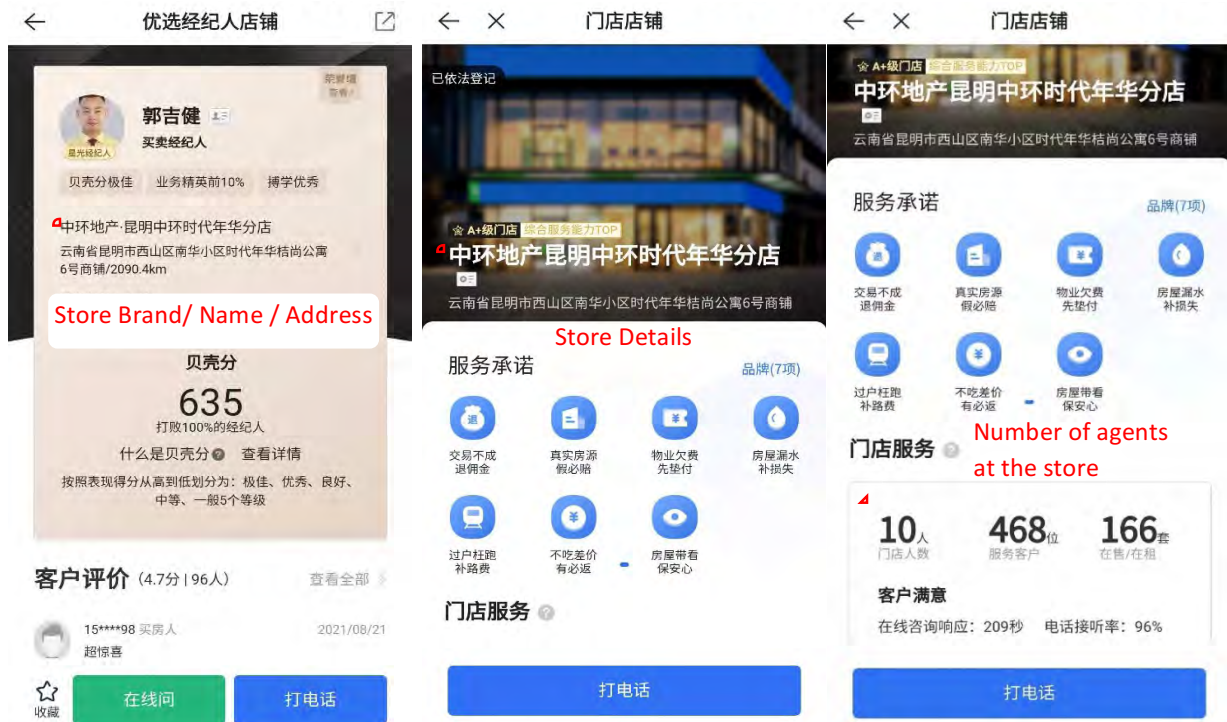
1. First, we used the 'Find Agent' function under each city to retrieve the agent data.



Left: The find and an agent function, Right: Agent information

⁶⁹ The 76 days of data plus a 14-17 wait time approximately equal 90-93 days; or one calendar quarter, less the 14-17 day delay. When we make our estimates, we prorate the 76 period to match the number of days in the quarter (91 days for Q2 and 92 days for Q3).

- Each agent works at a real estate brokerage store. We use agents' pages to identify their affiliated stores in each city. We then collect the basic store information for each Lianjia and connected brokerage, including the number of agents, store names, store addresses and store URL.



Left: the agent's store information, Center: the store name, address, and link to its SAIC business registration certificate, Right: more store details including number of agents at the store, number of clients, and active listings

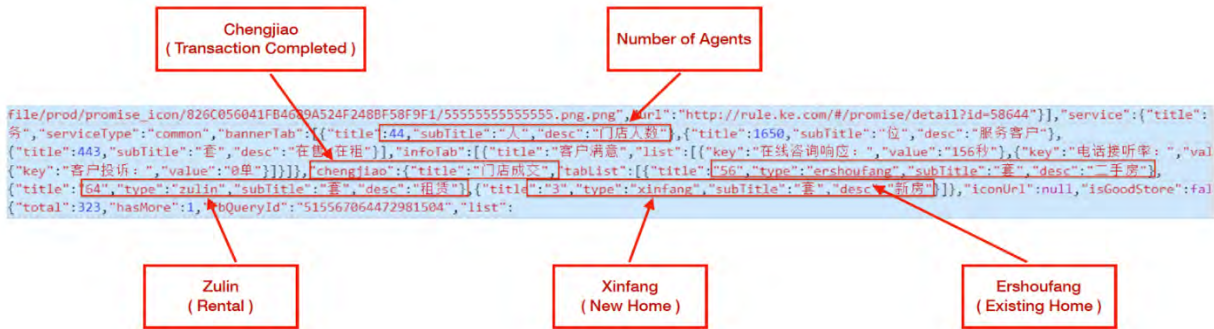
- We analyzed the store details in the code and collected a category of data labelled "Store Completed Transactions" or "门店成交," which shows the number of transactions at each store, including existing home transactions, new home transactions and rental transactions, for the 76-day period preceding the new listing delay.



Above: the app page displaying completed transactions, transaction details including prices, and its code

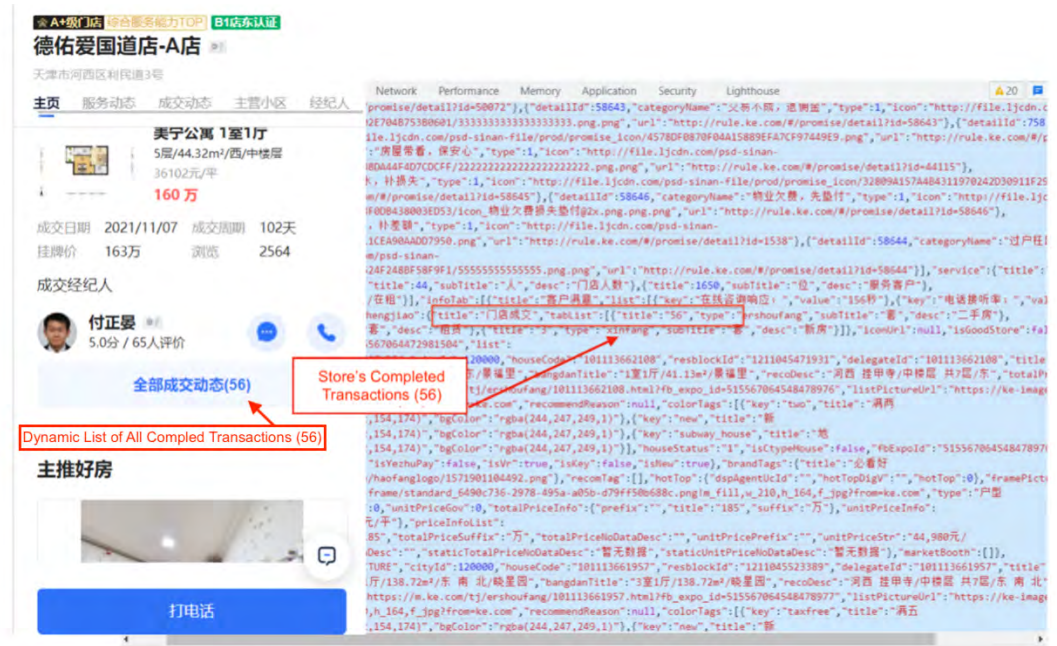
Both English, Chinese and Romanized Chinese or “pinyin” are written in the code. When in pinyin, the Chinese word for completed transactions is “Chengjiao” (成交). The terms “chengjiao”, “zulin” (租赁, rental), “xinfang” (新房, new home), “ershoufang” (二手房, existing home) and others can be seen in the code.

Looking at a single example below, the “chengjiaoData” show 64 rentals, 3 new home sales, and 56 existing home sales in the 76 days prior to the delay for this particular store. The number of existing home sales can also be tied to the number of transactions shown on the individual store’s transaction list tab.



Above: sections of the BEKE app code showing number of rental, new home, and existing home transactions

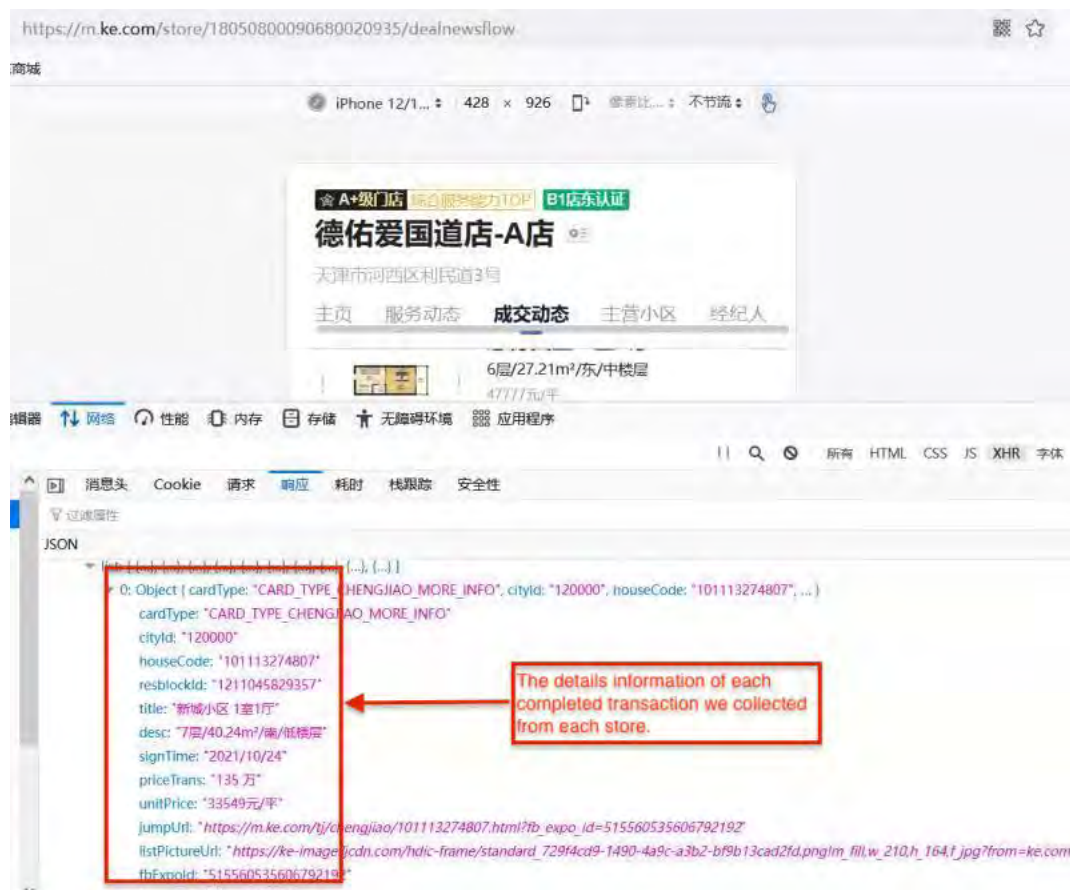
- BEKE’s platform lists detailed information for its existing home transactions for each store under the tab called “dynamic list of completed transactions” (成交动态).⁷⁰ The information contained on this tab includes property information, transaction price, date of transaction, and price per square meter for an existing home transaction. Our program collected this detailed transaction data for the stores on the platform identified via the “Find Agent” search program. We collected the number of transactions posted at the store level.



Above: the main page of the app showing the current dynamic list of all completed transactions and its code

⁷⁰ Note: auto-translate functions may label the dynamic list of completed transactions (成交动态) as transaction trends, transaction dynamics, etc.

The StoreID is a unique identifier for each store on BEKE's platform. We use it to collect all the transaction details for each company-owned or connected store on BEKE's platform.



Above: additional details regarding completed transaction available in the code

We used the unique StoreID to collect all the transaction details for each Company owned and connected store on BEKE's platform.



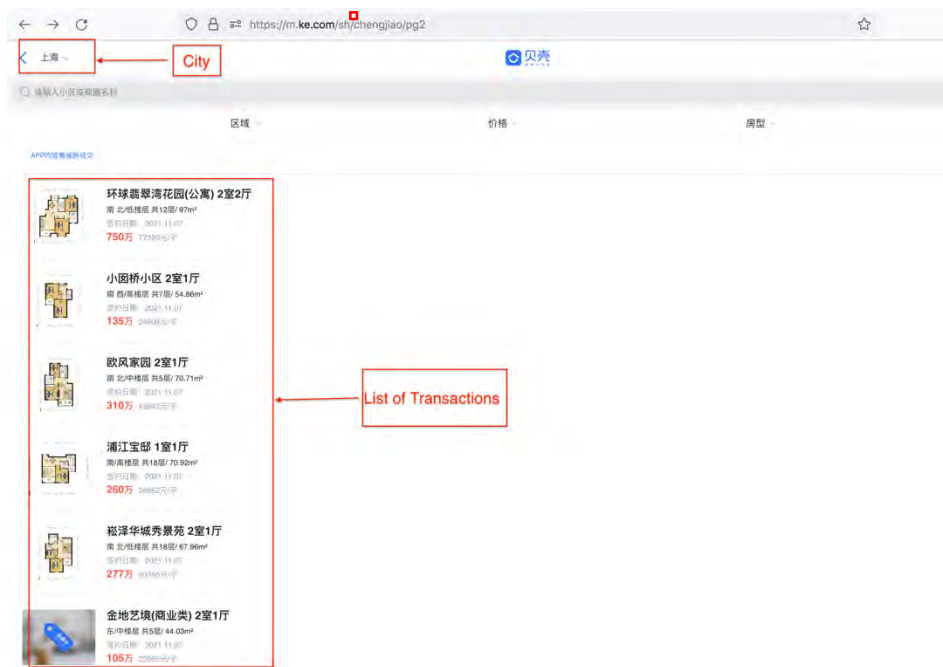
Above: the store ID displayed in the code

Our program was able to collect the details of the most recent 10 existing home transactions' details listed on each store's page. If stores had more than 10 transactions during the 76-day period, only the most recent 10 transactions' details were collected. However, most stores had fewer than 10 recent transactions, in which case all transactions were collected.

Ultimately, we obtained detailed information for approximately two-thirds of the transactions that comprise our data set. For example, our August data collection retrieved details for 96,636 of the 142,220 existing home transactions identified from 5/25 to 8/8 in Step 3, a 76-day period.

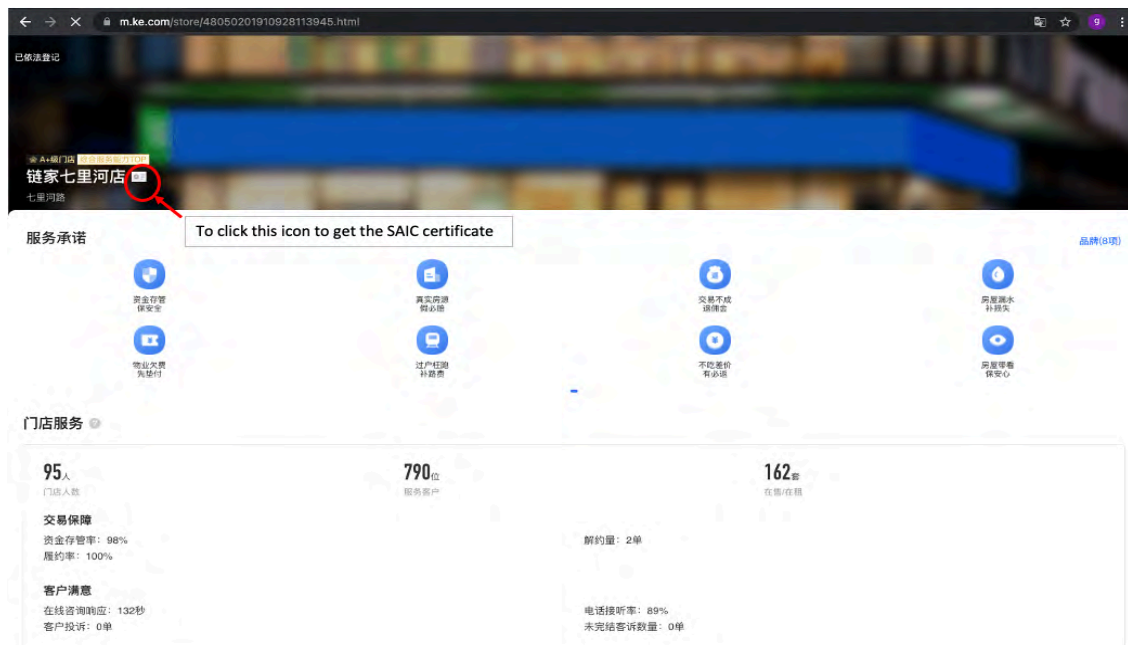
5. Another set of completed transaction data (chengjiaoData) was available at the city level. We made an additional data collection of this city level data for some cities; however the store level data was used as the primary date set.

For example, to obtain our estimate of the average number of transactions for Shanghai in 2Q, we collected the data at the city level from April 25, 2021 to May 15, 2021. The results found 3,000 transactions over these 21 days. To avoid collecting a partial day, we selected just the 20 full days from April 26 to May 15. We prorated the results to be consistent with the data set and estimated that all Lianjia stores in Shanghai made 10,857 transactions over a 76-day period.



Above: example of completed transaction (chengjiao) data collected at the city level for Shanghai

6. Approximately two thirds of the stores also listed their SAIC registration certificates on the platform alongside their SAIC registration number, registered name, and registered address. We used this SAIC license data to verify the store count, check ownership, and registration information.



Above: a typical store landing page on the BEKE platform, this shows the link to the SAIC registration

Below: the corresponding link and SAIC registration certificate with arrows pointing to key information

brandName	storeName	compCert
链家	七里河店	https://ke-image.ljcdn.com/ehr-personnel/2018122414003148358KIFIHB.jpg
Lianjia	Qilihe Store	

certCode	certName	location
91410104MA454WA87A	郑州高展房地产经纪有限公司	河南省郑州市管城回族区腾飞路4号3号商业1-2层109号



7. Home Sales GTV Calculation

We primarily used two data sets of data from our data collections to estimate BEKE's home sales GTV in 2Q and 3Q 2021. The data collected are from two 76-day periods and contain the number of transactions from pulled all of the stores on the platform which have the Find Agent function on their site.

The calculation for the new home estimates is straightforward. For new home sales GTV, we used the number of transactions collected from BEKE's platform multiplied by the disclosed average value per transaction reported by BEKE in its SEC filings.⁷¹

$$\text{number of transactions} \times \text{the average selling price per transaction}$$

Afterwards we prorate the 76-day total to match the number of days in the quarter, for Q2 this is 91 days and for Q3 this is 92 days.

i. Lianjia New Home Sales

BEKE stated that its own Lianjia stores are operating in 29 cities.⁷² Over these two 76-day periods, our program collected new home transactions completed by Lianjia stores in all 29 cities. The total number of transactions collected was 19,963 between 5/25-8/8 and 18,501 between 6/30-9/13.

Lianjia – New Home Sales (76 Days)

May 25, 2021 - Aug 8, 2021			June 30, 2021 - Sep 13, 2021		
Ref.	City	# of New Home Sales	Ref.	City	# of New Home Sales
1	Beijing 北京	1,661	1	Beijing 北京	1,379
2	Chengdu 成都	4,180	2	Chengdu 成都	4,240
3	Shanghai 上海	1,278	3	Shanghai 上海	1,328
4	Chongqing 重庆	859	4	Chongqing 重庆	940
5	Shenzhen 深圳	222	5	Shenzhen 深圳	207
6	Guangzhou 广州	659	6	Guangzhou 广州	664
7	Dalian 大连	1,119	7	Dalian 大连	1,144
8	Tianjin 天津	808	8	Tianjin 天津	717
9	Wuhan 武汉	1,238	9	Wuhan 武汉	1,129
10	Nanjing 南京	787	10	Nanjing 南京	699
11	Xi'an 西安	614	11	Xi'an 西安	693
12	Hangzhou 杭州	312	12	Hangzhou 杭州	340
13	Zhengzhou 郑州	1,046	13	Zhengzhou 郑州	745
14	Qingdao 青岛	585	14	Qingdao 青岛	495
15	Shenyang 沈阳	680	15	Shenyang 沈阳	660
16	Suzhou 苏州	363	16	Suzhou 苏州	323
17	Hefei 合肥	388	17	Hefei 合肥	348
18	Jinan 济南	1,082	18	Jinan 济南	782
19	Yantai 烟台	522	19	Yantai 烟台	403
20	Xiamen 厦门	154	20	Xiamen 厦门	108
21	Shijiazhuang 石家庄	337	21	Shijiazhuang 石家庄	315
22	Changsha 长沙	432	22	Changsha 长沙	339
23	Foshan 佛山	209	23	Foshan 佛山	181
24	Dongguan 东莞	68	24	Dongguan 东莞	57
25	Langfang 廊坊	97	25	Langfang 廊坊	69
26	Huizhou 惠州	49	26	Huizhou 惠州	40
27	Wuxi 无锡	159	27	Wuxi 无锡	94
28	Haikou 海口	0	28	Haikou 海口	1
29	Zhongshan 中山	55	29	Zhongshan 中山	61
	Total	19,963		Total	18,501

Source: Data Collected from BEKE's Platform

⁷¹ Prorated from 76 days to the number of days in the quarter. BEKE disclosed the average value per transaction in its 2020 20-F. Real estate market data show that property prices are flat in the past two years.

⁷² BEKE 2020 20-F, p. 60

ii. Connected Stores New Home Sales

Over these same two 76-day periods, we estimate that in Q2 there were ~93,975⁷³ and in Q3 ~87,998⁷⁴ new home transactions from connected stores.

Connected Stores – New Home Sales (76 Days) (May 25, 2021 – Aug 8, 2021)

Ref	City		Number of Transactions	Ref	City		Number of Transactions	Ref	City		Number of Transactions
1	Ji'an	吉安	674	48	Tangshan	唐山	392	95	Kunshan	昆山	841
2	Zhognshan	中山	787	49	Datong	大同	69	96	Weihai	威海	203
3	Ningbo	宁波	1,005	50	Dali	大理	144	97	Xinxiang	新乡	143
4	Linyi	临沂	1,836	51	Zibo	淄博	605	98	Fuyang	阜阳	74
5	Taiyuan	太原	3,713	52	Jinan	济南	1,498	99	Neijiang	内江	86
6	Leshan	乐山	1,524	53	Yantai	烟台	885	100	Haikou	海口	96
7	Qingdao	青岛	2,338	54	Foshan	佛山	1,378	101	Baotou	包头	418
8	Haerbin	哈尔滨	737	55	Guangzhou	广州	959	102	Jilin	吉林	94
9	Changsha	长沙	3,323	56	Dandong	丹东	286	103	Changzhou	常州	241
10	Wuxi	无锡	975	57	Xuchang	许昌	699	104	Jiaxing	嘉兴	365
11	Guiyang	贵阳	1,382	58	Wuhan	武汉	3,491	105	Jinhua	金华	61
12	Zhoukou	周口	532	59	Xiangyang (HB)	襄阳	620	106	Beihai	北海	331
13	Jiujiang	九江	712	60	Tianjin	天津	2,970	107	Ha'an	海安	37
14	Shenyang	沈阳	2,145	61	Nanjing	南京	827	108	Taizhou	台州	139
15	Hangzhou	杭州	1,549	62	Xuzhou	徐州	492	109	Ma'anshan	马鞍山	51
16	Shangrao	上饶	1,206	63	Langfang	廊坊	995	110	Huanggang	黄冈	55
17	Hanzhong	汉中	562	64	Heze	菏泽	275	111	Hengyang	衡阳	36
18	Xiangyang (SX)	咸阳	496	65	Xiangxi	湘西*	65	112	Baoding	保定	56
19	Zhenjiang	镇江	365	66	Nanning	南宁	508	113	Yongzhou	永州	47
20	Changde	常德	537	67	Liaozhou	柳州	441	114	Dongguan	东莞	283
21	Nanchang	南昌	2,182	68	Huizhou	惠州	842	115	Taicang	太仓	16
22	Weifang	潍坊	1,219	69	Guilin	桂林	490	116	Changshu	常熟	31
23	Handan	邯郸	287	70	Baoji	宝鸡	70	117	Pingxinag	萍乡	51
24	Kaifeng	开封	1,271	71	Xiamen	厦门	1,391	118	Panzhihua	攀枝花	52
25	Anqing	安庆	689	72	Zhuzhou	株洲	451	119	Yancheng	盐城	107
26	Huangshi	黄石	558	73	Nantong	南通	1,147	120	Huzhou	湖州	64
27	Meishan	眉山	339	74	Guangyuan	广元	146	121	Luzhou	泸州	44
28	Nanchong	南充	785	75	Chongqing	重庆	1,575	122	Yuncheng	运城	19
29	Zhengzhou	郑州	2,436	76	Zhumadian	驻马店	317	123	Tianshui	天水	14
30	Dazhou	达州	770	77	Zhangjiakou	张家口	189	124	Jurong	句容	4
31	Lanzhou	兰州	876	78	Jining	济宁	423	125	Xinyu	新余	12
32	Kunming	昆明	1,953	79	Jiangmen	江门	226	126	Tongliao	通辽	15
33	Fushou (FJ)	福州	1,006	80	Mianyang	绵阳	967	127	Lianyungang	连云港	20
34	Luoyang	洛阳	1,271	81	Zhaoxing	绍兴	489	128	Fuzhou (JX)	抚州	13
35	Chengdu	成都	1,478	82	Wuhu	芜湖	538	129	Yichun	宜春	25
36	Zhuhai	珠海	547	83	Zhangzhou	漳州	742	130	Chengde	承德	2
37	Dalian	大连	2,024	84	Shenzhen	深圳	548	131	Qidong	启东	2
38	Xi'an	西安	2,425	85	Zhanjiang	湛江	103	132	Ta'an	泰安**	105
39	Hefei	合肥	1,745	86	Jinzhong	晋中	41	133	Urumqi	乌鲁木齐**	142
40	Yueyang	岳阳	362	87	Hohhot	呼和浩特	635	134	Deyang	德阳**	296
41	Wenzhou	温州	572	88	Jingdezhen	景德镇	90	135	Liangshan	凉山**	285
42	Shijiazhuang	石家庄	1,580	89	Yichang	宜昌	456	136	Suining	遂宁**	156
43	Chifeng	赤峰	584	90	Qingyuan	清远	64	137	Quzhou	衢州**	1
44	Changchun	长春	1,383	91	Zunyi	遵义	209	138	Yibin	宜宾**	162
45	Ganzhou	赣州	669	92	Ya'an	雅安	129	139	Chengmai	澄迈**	4
46	Suzhou	苏州	1,656	93	Huai'an	淮安	235	140	Pingdingshan	平顶山**	40
47	Quanzhou	泉州	904	94	Yinchuan	银川	555	Total	93,975		

*湘西土家族苗族自治州

**Estimated number of transactions

⁷³ Our Q2 collection data for new homes did not contain the number of transactions for Tai'an, Urumqi, Deyang, Liangshan, Suining, Quzhou, Yibin, Chengmai, Pingdingshan; estimates were used based on other collected data for these cities from Q3 and Q4 data.

⁷⁴ Our Q3 collection data for new homes does not contain number of transactions for Pingdingshan; estimates were used based on Pingdingshan data from Q4.

Connected Stores – New Home Sales (76 Days) (Jun 30, 2021 – Sep 13, 2021)

Ref	City		Number of Transactions	Ref	City		Number of Transactions	Ref	City		Number of Transactions
1	Ji'an	吉安	684	48	Tangshan	唐山	396	95	Kunshan	昆山	690
2	Zhognshan	中山	804	49	Datong	大同	82	96	Weihai	威海	149
3	Ningbo	宁波	875	50	Dali	大理	148	97	Xinxiang	新乡	141
4	Linyi	临沂	1,179	51	Zibo	淄博	595	98	Fuyang	阜阳	88
5	Taiyuan	太原	3,111	52	Jinan	济南	1,324	99	Neijiang	内江	137
6	Leshan	乐山	1,539	53	Yantai	烟台	649	100	Haikou	海口	49
7	Qingdao	青岛	2,007	54	Foshan	佛山	1,374	101	Baotou	包头	581
8	Haerbin	哈尔滨	716	55	Guangzhou	广州	1,277	102	Jilin	吉林	55
9	Changsha	长沙	2,723	56	Danzhou	丹东	257	103	Changzhou	常州	257
10	Wuxi	无锡	793	57	Xuchang	许昌	638	104	Jiaxing	嘉兴	286
11	Guiyang	贵阳	1,066	58	Wuhan	武汉	3,788	105	Jinhua	金华	77
12	Zhokou	周口	489	59	Xiangyang (HB)	襄阳	661	106	Beihai	北海	368
13	Jiujiang	九江	621	60	Tianjin	天津	2,976	107	Ha'an	海安	30
14	Shenyang	沈阳	1,803	61	Nanjing	南京	899	108	Taizhou	台州	147
15	Hangzhou	杭州	1,533	62	Xuzhou	徐州	549	109	Ma'anshan	马鞍山	75
16	Shangrao	上饶	1,168	63	Langfang	廊坊	847	110	Huanggang	黄冈	67
17	Hanzhong	汉中	505	64	Heze	菏泽	352	111	Hengyang	衡阳	29
18	Xiangyang (SX)	咸阳	421	65	Xiangxi	湘西**	143	112	Baoding	保定	43
19	Zhenjiang	镇江	275	66	Nanning	南宁	529	113	Yongzhou	永州	37
20	Changde	常德	472	67	Liaozhou	柳州	521	114	Dongguan	东莞	282
21	Nanchang	南昌	1,972	68	Huizhou	惠州	769	115	Taicang	太仓	14
22	Weifang	潍坊	1,182	69	Guilin	桂林	492	116	Changshu	常熟	32
23	Handan	邯郸	271	70	Baoji	宝鸡	93	117	Pingxinag	萍乡	29
24	Kaifeng	开封	768	71	Xiamen	厦门	962	118	Panzhuhua	攀枝花	117
25	Anqing	安庆	580	72	Zhuzhou	株洲	479	119	Yancheng	盐城	127
26	Huangshi	黄石	449	73	Nantong	南通	1,087	120	Huzhou	湖州	84
27	Meishan	眉山	333	74	Guangyuan	广元	136	121	Luzhou	泸州	78
28	Nanchong	南充	725	75	Chongqing	重庆	1,685	122	Yuncheng	运城	35
29	Zhengzhou	郑州	1,906	76	Zhumadian	驻马店	256	123	Tianshui	天水	30
30	Dazhou	达州	820	77	Zhangjiakou	张家口	146	124	Jurong	句容	3
31	Lanzhou	兰州	508	78	Jining	济宁	253	125	Xinyu	新余	6
32	Kunming	昆明	1,614	79	Jiangmen	江门	264	126	Tongliao	通辽	29
33	Fuzhou (FJ)	福州	1,084	80	Mianyang	绵阳	875	127	Lianyungang	连云港	12
34	Luoyang	洛阳	926	81	Zhaoxing	绍兴	372	128	Fuzhou (JX)	抚州	7
35	Chengdu	成都	3,099	82	Wuhu	芜湖	539	129	Yichun	宜春	23
36	Zhuhai	珠海	569	83	Zhangzhou	漳州	565	130	Chengde	承德	10
37	Dalian	大连	2,099	84	Shenzhen	深圳	564	131	Qidong	启东	0
38	Xi'an	西安	2,867	85	Zhanjiang	湛江	137	132	Ta'an	泰安	79
39	Hefei	合肥	1,612	86	Jinzhong	晋中	25	133	Urumqi	乌鲁木齐	111
40	Yueyang	岳阳	414	87	Hohhot	呼和浩特	487	134	De'yang	德阳	201
41	Wenzhou	温州	364	88	Jingdezhen	景德镇	82	135	Liangshan	凉山	204
42	Shijiazhuang	石家庄	1,594	89	Yichang	宜昌	404	136	Suning	遂宁	102
43	Chifeng	赤峰	412	90	Qingyuan	清远	91	137	Quzhou	衢州	1
44	Changchun	长春	1,189	91	Zunyi	遵义	244	138	Yibin	宜宾	174
45	Ganzhou	赣州	629	92	Ya'an	雅安	110	139	Chengmai	澄迈	0
46	Suzhou	苏州	1,644	93	Hua'an	淮安	207	140	Pingdingshan	平顶山*	38
47	Quanzhou	泉州	527	94	Yinchuan	银川	594	Total			87,998

*Estimated number of transactions

**湘西土家族苗族自治州

BEKE claimed that the average price per new home was RMB 2.1 million from Lianjia stores and RMB 1.4 million for the connected stores in its 2020 20-F filing.⁷⁵

⁷⁵ BEKE 2020 20-F, p 91, p. 99

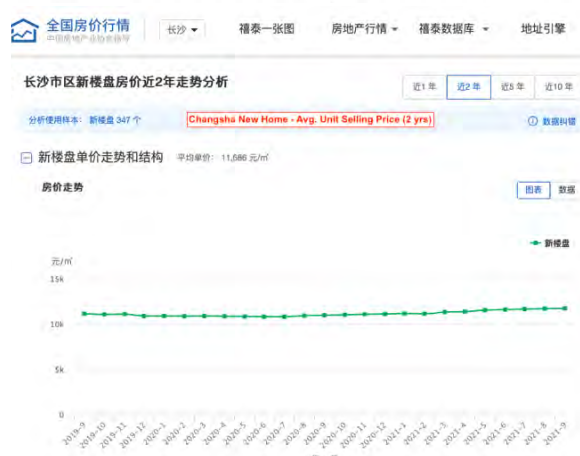
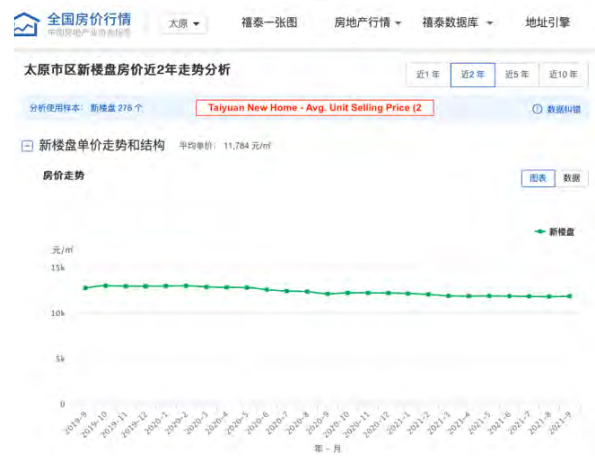
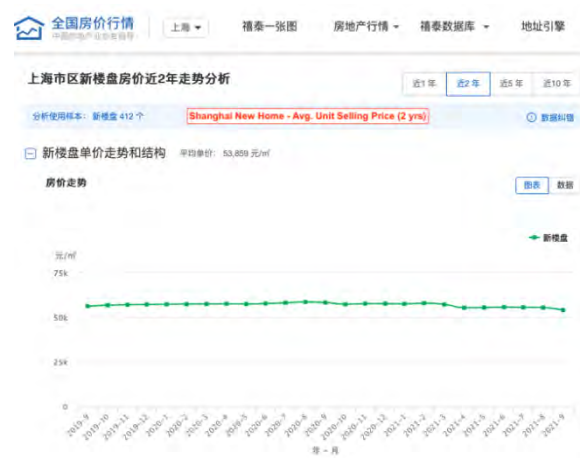
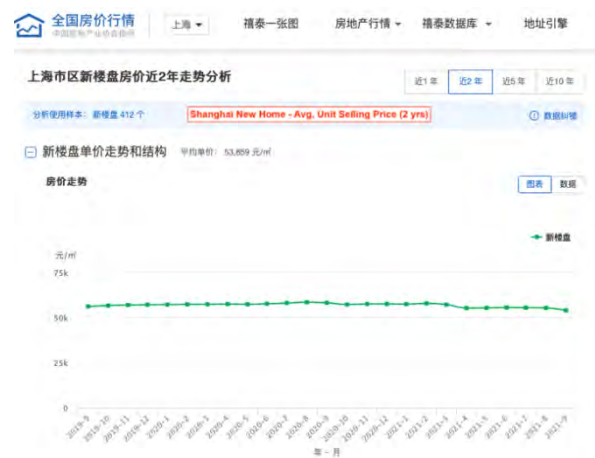
BEKE's Average Price per New Home

	RMB M	Calculation
GTV new homes	1,383,000	a
Lianjia Stores	276,700	b
Connected Stores	1,106,300	c
# of transactions - new home ('000)	924	d
Lianjia Stores	134	f=d-e
Connected Stores	790	e
Average price per transaction		
Lianjia Stores	2.1	g=b/f
Connected Stores	1.4	h=c/e
New home transaction services revenue	37,900	i
Commission rate	2.74%	j=i/a

Using BEKE's self-reported values for new home sales in 2020, we believe we are able to reasonably estimate such values for 2021 based on real estate housing data in China.

CRE Price, hosted by China Real Estate Association (CRE), is a platform that [provides](#) real estate transaction data in China, including average home prices by geographical location.

According to the CRE Price platform, on average over the past 2 years, new home prices have remained relatively unchanged. Therefore, we believe using the average value of new homes sold by BEKE in 2020 is reasonable to estimate the value of new homes sold by the Company in 2021. Below we show the two-year pricing trends for the Tier 1 Cities (Beijing and Shanghai), New Tier 1 Cities (Chengdu and Wuhan), and Tier 2 Cities (Taiyuan and Changsha). The CRE price data indicates that prices were largely unchanged in Q2-Q3 2021 compared with 2020.



BEKE claimed that its GTV from existing home sales was RMB 908 billion in 2Q-3Q 2021. Yet based on the transaction records collected from its own platform and the price disclosed by the Company, we calculated that BEKE's new home sales GTV was RMB 402 billion in 2Q-3Q 2021, suggesting the Company inflated its new home transaction GTV by at least 126%.

BEKE Inflated its New Home Sales GTV by 125% in 2Q-3Q 2021

	Avg. Price	76 days (May 25 - Aug 8)	2Q 2021 (91 days)	2Q 2021	2Q 2021
RMB M	per Home	# of new homes	Estimated GTV	Estimated GTV	Inflated%
New homes - Lianjia	2.06	19,963	41,099	49,211	83,800
New homes - Connected Stores	1.40	93,975	131,668	157,655	414,500
Total		113,938	172,767	206,866	498,300
					141 %
	Avg. Price	76 days (Jun 30 - Sep 13)	3Q 2021 (92 days)	3Q 2021	3Q 2021
RMB M	per Home	# of new homes	Estimated GTV	Estimated GTV	Inflated%
New homes - Lianjia	2.06	18,501	38,089	46,108	72,550
New homes - Connected Stores	1.40	87,998	123,293	149,249	337,550
Total		106,499	161,382	195,358	410,100
					110 %
	Avg. Price	152 days	2Q-3Q 2021	2Q-3Q 2021	2Q-3Q 2021
RMB M	per Home	# of new homes	Estimated GTV	Estimated GTV	Inflated%
New homes - Lianjia	2.06	38,464	79,189	95,319	156,350
New homes - Connected Stores	1.40	181,973	254,961	306,904	752,050
Total		220,437	334,150	402,224	908,400
					126 %

b. Existing Homes

Our program collected 145,220 transactions of existing homes on BEKE's platform over a 76-day period in Q2 2021, including data from all 29 cities in which Company owned brokerage Lianjia stores. The transaction prices for houses are publicly available in most of the cities in China.⁷⁶ In total, two thirds of the collected transactions also included transaction details with the price of the sale, making assumptions unnecessary to calculate GTV of these existing home sales. For the remaining transactions without price data, we benchmarked them against a reference city selected for which we did have transaction price data collected from the platform. To do so we used the average house listing prices [provided](#) by CRE Price and adjusted them according to the relative difference in the prices from CRE Price.⁷⁷

i. Existing Home Sales: Lianjia Network of Company Owned Brokerages

Over a 76-day period in Q2 2021, our collection captured 34,646 transactions of existing home transactions done by Lianjia stores in 27 cities out of their 29 cities over the prior 76-day period.

The two cities without detailed transaction data on the platform were Chengdu and Shanghai. To get the estimated number of transactions for Chengdu, we calculated the overall average number of transactions per store for all other Lianjia stores for which we collected data over the full 76 days (6.12 transactions/store) and applied that number to the number of Lianjia agents in Chengdu recorded in the data collection (952). This calculation provided an estimated total of 5,825 Chengdu transactions during the period.

For Shanghai we drew on a data set collected over a period of 20 full days from Monday, April 26th to Saturday, May 15th, wherein we found 3,000 transactions and then prorated this to 76 days to match the data set size. This calculation provided an estimated total of 10,754 transactions for 76 days.

After adding the number of existing home transactions in Chengdu and Shanghai, we calculate that all Lianjia stores on the platform sold 51,225 existing homes over the 76 days period.

⁷⁶ For the 142 cities we collected, BEKE's platform has price information in ~62% of the cities on its platform.

⁷⁷ CRE Price, hosted by China Real Estate Association (CRE), is a platform provides real estate transaction data in China, including housing prices, rents, and new housing prices.

GTV Estimate for Lianjia Existing Home Sales with Adjustments (76 Days) (May 25, 2021 – Aug 8, 2021)

City	Number of Stores on the Platform	Number of Transactions (Collected)	Number of Transactions (Estimated)	Number of Transactions/Store	Avg. Price per Transaction Collected (RMB '000)	Estimated/Adjusted Avg. Price per Transaction* (RMB '000)	Estimated GTV 76 days (RMB '000)	Note
Dalian	大连	326	2,476	7.6	1,348		3,337,412	
Shenyang	沈阳	149	868	5.8	1,134		984,541	
Jinan	济南	118	518	4.4	1,707		884,198	
Chengdu	成都	952	5,825	6.1		2,007	11,688,726	Note 1, 3
Zhengzhou	郑州	194	939	4.8	1,588		1,490,678	
Changsha	长沙	65	251	3.9	1,245		312,428	
Qingdao	青岛	159	1,007	6.3	1,970		1,983,313	
Foshan	佛山	60	153	2.6	1,618		247,478	
Nanjing	南京	269	1,220	4.5	2,836		3,459,517	
Yantai	烟台	111	560	5.0	1,082		605,801	
Guangzhou	广州	371	1,183	3.2	3,002		3,551,401	
Shijiazhuang	石家庄	65	261	4.0	1,476		385,274	
Tianjin	天津	310	2,282	7.4	1,881		4,291,445	
Hefei	合肥	138	719	5.2	-	2,063	1,482,951	Note 3
Wuhan	武汉	275	1,338	4.9	1,992		2,665,034	
Xi'an	西安	207	1,201	5.8	-	1,896	2,277,193	Note 3
Hangzhou	杭州	204	1,110	5.4	-	3,185	3,535,093	Note 3
Wuxi	无锡	37	174	4.7	-	2,486	432,557	Note 3
Beijing	北京	1,364	13,898	10.2	-	4,593	63,835,060	Note 3
Suzhou	苏州	145	557	3.8	2,967		1,652,748	
Shanghai	上海	902	10,754	11.9	-	4,529	48,708,286	Note 2
Langfang	廊坊	40	536	13.4	1,457		781,163	
Xiamen	厦门	79	129	1.6	3,079		397,210	
Chongqing	重庆	446	2,313	5.2	1,315		3,040,584	Note 3
Dongguan	东莞	56	85	1.5	2,624		223,020	
Shenzhen	深圳	391	480	1.2	-	4,926	2,364,495	Note 3
Zhongshan	中山	22	54	2.5	1,202		64,900	
Huizhou	惠州	38	128	3.4	984		125,997	
Haikou	海口	23	206	9.0	1,626		335,052	
Sub-Total		7,516	34,646	16,579			165,143,555	
Additional adjustment to 76 day for timing difference							9.66%	Note 4
Total Estimate for 76 days (4/1 ~ 6/30)							181,096,423	

Notes:

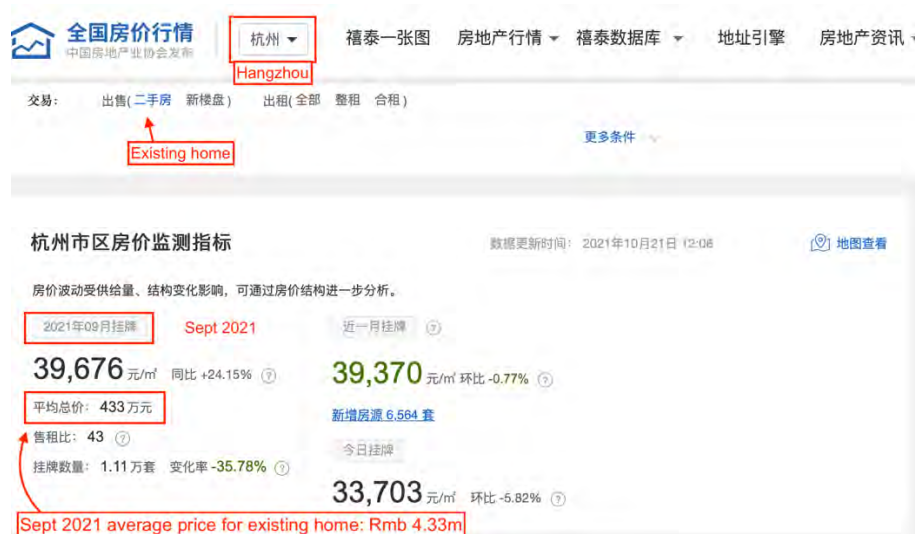
1. Chengdu's number of transactions was estimated based on the average number of transactions per store (6.12/store) for all other Lianjia stores for which transaction data was available and then multiplied by the number of Chengdu stores.
2. Shanghai's estimates are based on 2,830 transactions, 20 full days' transactions from 4/26 to 5/15 and prorated to 76 days. Shanghai's avg transactions/store is the 2nd highest, leading us to believe the estimate is highly company favorable.
3. When the average value of the transactions was not available for a specific city, a city with similar characteristics was used as a base, and an adjustment was applied using CRE price existing home sale data.
4. Additional adjustments made to number of transactions and GTV to accommodate the timing difference between the collection period (5/25 ~ 8/8) and the 2Q21 period (4/1 ~ 6/30).

When data on the average value of the transactions was not available for a specific city, a city with similar characteristics was used as a base, and an adjustment was applied in order to approximate its localized value using data on existing home sales from CRE price.⁷⁸ The cities for which such estimates were made are shown in the table below. For the purposes of benchmarking cities, we used the 2021 City Tier rankings by Yicai. These are included to demonstrate that the reference cities are of an equal or higher tier, indicating a higher level of development. We believe that benchmarking cities average home prices against higher Tier cities creates a Company favorable, making our estimate of GTV more conservative.

We use the CRE's pricing for reference; however, for illustrative purposes only we provide the examples which present the September data from the CRE website. Note, in our calculation, Hangzhou's adjustment uses the CRE's 2Q average pricing data, not that from September.

⁷⁸ China Real Estate Association, (Qingdao Xitai Real Estate Data Co., Ltd.) 中国房地产业协会, 青岛禧泰房地产数据有限公司, www.creprice.cn

In the table below the left side provides reference price information from the CRE website, and the right side shows the data for the adjustment. We used the percent difference in the average price per house from the CRE site and applied it to the city transaction price. For example, Nanjing and Hangzhou are both provincial capitals, geographically close to each other, and had average pricing per house higher than most other cities.



Above: CRE data for Sept 2021 Hangzhou existing home ASP (example)



Above: CRE data for Sept 2021 Nanjing existing home ASP (example)

The table below shows the cities and data which were adjusted based on the average sales price collected from BEKE's platform for the reference city and the CRE price data's average listing price for 2Q21. The CRE listing price will be higher than the actual sales price.⁷⁹

⁷⁹ As this price ratio is used to adjust the transaction price data for the reference city collected from the BEKE platform, the effect is likely to be company favorable, but probably small.

2Q21 Adjusted Transaction Values from CRE Price

City	2021 City Tier Rank	Existing Homes (CRE price)	Adjustment to Value per Transaction			
		2Q21 Avg House Listing Price	Reference City	Value per Reference City Transaction	Adjustment based on Avg House Listing Price (%)	Adjusted Transaction Value
Lianjia Stores						
Shanghai	1st Tier	7,573		4,529		
Beijing	1st Tier	7,680	Shanghai	4,529	1.41%	4,593
Shenzhen	1st Tier	8,237	Shanghai	4,529	8.8%	4,926
Suzhou	New 1st Tier	2,733		2,967		
Wuxi	Tier 2	2,290	Suzhou	2,967	-16.2%	2,486
Wuhan	New 1st Tier	2,253		1,992		
Hefei	Tier 2	2,333	Wuhan	1,992	3.6%	2,063
Xi'an	New 1st Tier	2,420	Wuhan	1,992	7.4%	2,139
Chengdu	New 1st Tier	2,270	Wuhan	1,992	0.7%	2,007
Nanjing	New 1st Tier	3,300		2,836		
Hangzhou	New 1st Tier	4,067	Nanjing	2,836	23.2%	3,494

Units: '000 rmb

We collected Q2 data for the existing home sales from BEKE's platform over the 76-day period from May 25 to August 8, 2021. This 76-day period straddles 6 weeks at the end of 2Q21 and 6 weeks at the beginning of 3Q21. Because of new policy initiatives aimed at reining in the residential real estate market, sales volumes declined at the beginning of the third quarter.^{80,81} We therefore applied an upward adjustment to the collected data to reflect what should have been stronger sales volumes in the first half of 2Q21. This adjustment to the sales volume is based on data published by the China Housing Real Estate Association ("China Housing") (中房研协测评研究中心) for the second-hand housing market for 13 major cities⁸² in April,⁸³ May,⁸⁴ June,⁸⁵ July,⁸⁶ and August.⁸⁷ The China Housing reported 402,000 transactions during the 2Q21 period for these 13 cities.

To calculate the adjustment, we started with the monthly number of transactions reported by China Housing and convert that to a daily average for the months May through August. We then applied the daily average number of transactions to the number of days in each month over our 76-day period, this provides a volume of transactions for the 76 day period based on China Housing data. Then we take the sum and prorate the 76 days to the 91 days in 2Q21.

China Housing reported 402,000 transactions during the 2Q21. The estimated number of transactions for the 76-day period based off of China Housing data was 366,588. This calculation indicates an adjustment of +9.66% to our 76-day estimates would be appropriate to accommodate the timing difference.

⁸⁰ http://www.xinhuanet.com/english/2021-01/06/c_139646693.htm, <https://www.bloombergquint.com/politics/xi-renews-call-housing-should-be-for-living-in-not-speculation>

⁸¹ The China Real Estate Association data indicated that across cities covered, the average selling price for the existing homes over our 76-day collection period was roughly flat compared to those in 2Q21, we did not make an adjustment to the average selling price to accommodate a difference between the first half of 2Q21 and the period of our data collection.

⁸² The 13 major cities are: Beijing, Shanghai, Guangzhou, Shenzhen, Tianjin, Qingdao, Nanjing, Wuhan, Zhengzhou, Chongqing, Chengdu, Xiamen, and Hefei.

⁸³ m.fangchan.com/data/13/2021-05-20/6811497953191334448.html

⁸⁴ m.fangchan.com/data/135/2021-06-21/6812575317111411031.html

⁸⁵ m.fangchan.com/data/133/2021-07-20/6823080881344024826.html

⁸⁶ www.fangchan.com/data/13/2021-08-18/6833595864750297431.html

⁸⁷ www.fangchan.com/data/135/2021-09-17/6844450560402592191.html

Adjustments to 2Q21 Estimated Number of Transactions for Timing Difference of Collection Period

Month	Number of Transactions Reported by China Housing	Number of Transactions Reported by China Housing in Q2	Est. Daily Number of Transactions	Days of Data Collection in Month in MW for 2Q Estimate	Est. Number of Transactions in China Housing data in 76 days	Conversion to 91 days for 2Q21	Adjustment: Upwards revision for 1st half 2Q21
April	143,000	143,000					
May	129,000	129,000	4,161	7	29,129		
June	130,000	130,000	4,333	30	130,000		
July	122,000		3,935	31	122,000		
August	97,000		3,129	8	25,032		
Total	621,000	402,000		76	306,161	366,588	402,000
Adjustment (%)						19.7%	9.66%

Additional Adjustment for 1st half of 2Q21

1. CREA data for the number of transactions during the 91 day 2Q21 period:	402,000
2. Calculation of CREA number of transactions if over 76 days from 5/25 to 8/8	306,161
3. Adjust number of transactions in data from 76 to 91 days	366,588
4. Adjustment ratio to 76 days of MW collected number of transactions to reflect a 4/1 and 6/30 collection	1.09660

After calculating the total from the number of transactions collected and estimated by the collected and estimated average prices per transaction, we apply the 9.66% timing adjustment to the estimate GTV for the 76-day period. This yields an 2Q 76-day Lianjia store GTV estimate of ~Rmb 181 billion. Last, we prorate the 76-day GTV to estimate a 91-day GTV for the 2nd quarter. Using this method, we approximate that BEKE's existing home GTV from Lianjia stores in Q2 2021 was only ~RMB 217 billion.

BEKE's 2Q21 reported existing home GTV sales for its Lianjia stores of RMB 309.5 billion, suggesting that the Lianjia existing home GTV figure was inflated by approximately ~43%.

In 3Q21, BEKE claimed that Lianjia stores' existing home sales GTV was RMB 185.3 billion. Our program collected another set of 76-day data, from June 30 to September 13, 2021.⁸⁸ During this 76-day period we estimate BEKE's Lianjia stores had approximately 40,248 transactions. After applying what we think are conservative estimate to complete the data set and prorating to the 76-day totals to the 3rd quarter's 92 days, we estimated that in 3Q21 BEKE's Lianjia existing home sales GTV was only Rmb ~161 billion, or inflated by approximately ~15%.

⁸⁸ Since the 76-day period of collected data for all cities except for Shanghai originated from within the 3Q21, no timing adjustments were necessary.

3Q21 - GTV Estimate for Lianjia Existing Home Sales (76 Days) with Adjustments

City	Number of Stores	Number of Transactions Collected	Number of Transactions (Estimated)	Number of Transactions/Store	Avg. Price per Transaction Collected (RMB '000)	Estimated/Adjusted Avg. Price per Transaction* (RMB '000)	Estimated GTV 76 days (RMB '000)	Notes
Beijing 北京	1,364	11,719		8.6		4,927	57,735,066	
Chengdu 成都	952		4,694	4.9		1,855	8,706,444	Note 1, 4
Shanghai 上海	902		7,619	8.4	4,587		34,946,365	Note 2
Chongqing 重庆	446	1,486		3.3	1,267		1,883,303	
Shenzhen 深圳	391	357		0.9		4,927	1,758,804	Note 4
Guangzhou 广州	371	1,247		3.4		3,002	3,743,494	Note 3
Dalian 大连	326	1,790		5.5	1,325		2,372,247	
Tianjin 天津	310	2,424		7.8	1,815		4,400,650	
Wuhan 武汉	275	905		3.3		1,992	1,802,760	Note 3
Nanjing 南京	269	809		3.0	2,564		2,074,358	
Xi'an 西安	207	735		3.6		1,855	1,363,146	Note 4
Hangzhou 杭州	204	781		3.8		3,061	2,390,282	Note 4
Zhengzhou 郑州	197	535		2.7	1,526		816,388	
Qingdao 青岛	159	801		5.0	1,938		1,552,623	
Shenyang 沈阳	149	710		4.8	1,140		809,089	
Suzhou 苏州	145	439		3.0	3,002		1,318,063	
Hefei 合肥	138	549		4.0		2,028	1,113,293	Note 4
Jinan 济南	118	424		3.6	1,780		754,511	
Yantai 烟台	111	500		4.5	1,033		516,448	
Xiamen 厦门	79	113		1.4	3,045		344,090	
Shijiazhuang 石家庄	65	234		3.6	1,389		325,031	
Changsha 长沙	65	213		3.3	1,190		253,420	
Foshan 佛山	60	148		2.5	1,713		253,469	
Dongguan 东莞	56	68		1.2	2,459		167,220	
Langfang 廊坊	40	517		12.9	1,469		759,454	
Huizhou 惠州	38	84		2.2	1,012		85,040	
Wuxi 无锡	37	107		2.9		2,487	266,078	Note 4
Haikou 海口	23	189		8.2	1,681		317,626	
Zhongshan 中山	22	51		2.3	1,194		60,900	
Totals	7,519	27,935	12,313		37,129	26,132	132,889,662	

Notes:

1. Chengdu's number of transactions was estimated based on the average number of transactions per store plus an additional 25% (4.93/store) for all other Lianjia stores for which transaction data was available and then multiplied by the number of stores.
2. Shanghai's estimated number of transactions is based on a 17.5% market share applied to the total number of existing home transactions reported in the quarter (52,768) by public sources and then prorated to 76 days.⁸⁹ Shanghai's avg number of transactions/store is the 3rd highest leading us to conclude that the adjustment is highly company favorable.
3. Guangzhou and Wuhan's average value per transaction is based on the 2Q (5/25-8/22) data set
4. When the average value of the transactions was not available for a specific city, a city with similar characteristics was used as a base, and an adjustment was applied using the existing homes sales data from CREprice.
5. The number of transactions and average value per transaction for other cities comes from the 76-day period, 6/30 - 9/13.

Using the same methods as in 2Q21, when data on the average value of the transactions was not available for a specific city, a city with similar characteristics was used as a base, and an adjustment was applied in order to approximate its localized value using data on existing home sales from CRE price.⁹⁰ The cities for which such estimates were made and their estimates are shown in the table below.

⁸⁹

https://zhuanlan.zhihu.com/p/428790729?utm_source=wechat_session&utm_medium=social&utm_oi=1013776284731772928

⁹⁰ www.creprice.cn

3Q21 Adjusted Transaction Values from CRE Price

City	2021 City Tier Rank	Existing Homes (CRE price)	Adjustment to Value per Transaction			
		3Q21 Avg House Listing Price	Reference City	Value per Reference City Transaction	Adjustment based on Avg House Listing Price (%)	Adjusted Transaction Value
Lianjia Stores						
Shanghai	1st Tier	7,203		4,587		
Beijing	1st Tier	7,737	Shanghai	4,587	7.4%	4,927
Shenzhen	1st Tier	8,237	Shanghai	4,587	14.3%	5,245
Suzhou	New 1st Tier	2,833		3,002		
Wuxi	Tier 2	2,347	Suzhou	3,002	-17.2%	2,487
Wuhan	New 1st Tier	2,207		1,992		
Hefei	Tier 2	2,223	Wuhan	1,992	0.8%	2,007
Xi'an	New 1st Tier	2,227	Wuhan	1,992	1.8%	2,028
Chengdu	New 1st Tier	2,070	Wuhan	1,992	-6.9%	1,855
Nanjing	New 1st Tier	3,443		2,564		
Hangzhou	New 1st Tier	4,110	Nanjing	2,564	19.4%	3,061

After prorating our data to the number of days in the 3rd quarter,⁹¹ we estimate that Lianjia's existing home sales GTV was approximately RMB ~161 billion in 3Q21, which suggests BEKE inflated the GTV by ~15%.

BEKE Inflated Lianjia's existing home sales GTV

RMB M	2Q 2021	3Q 2021	2Q-3Q 2021
Reported	309,500	185,300	494,800
MW estimate	216,839	160,984	377,823
Difference	(92,661)	(24,316)	(116,977)
Inflated%	43%	15%	31%

We note that our estimate is very sensitive to Shanghai's transaction numbers and average price per transaction. We believe Shanghai's estimates are conservative. For example, the Lianjia Shanghai Research Institute reported that the average existing home selling price in Shanghai in August and September was just Rmb 3.18 and 3.13 million/house.^{92,93} Were we to assume Shanghai's average transaction price was 3.85m (the mid-point of these two ranges), then our total 92-day GTV estimate for 3Q21 would be just Rmb 142.5m, yielding a GTV inflation estimate of 30%, or double our current estimate.

ii. Existing Home Sales: Connected Brokerages

BEKE's connected stores are supposedly independently owned and operated stores that sign up to the ACN network and collaborate on sales or part of its Deyou brand franchise network. The Company states its connected store network exists in "more than 100 economically vibrant cities in China."⁹⁴ BEKE claims its connected stores' existing home sale GTV was 342.5 billion in 2Q21.⁹⁵ We performed the same exercise as was used for the Lianjia store existing home sales to calculate the actual existing home sales GTV from connected stores.

⁹¹ 92 days

⁹² <http://house.china.com.cn/2107052.htm>

⁹³ https://wap.stcn.com/zqsbapp/yw/202110/t20211020_3776443.html

⁹⁴ BEKE 2020 20-F, p.54

⁹⁵ BEKE 2Q21 6-K, Financial Results

Our program's "Find Agent" search identified stores with agents listed on the platform in 140 cities. This excludes Beijing or Shanghai where no non-self-operated Lianjia brand branch stores are operating.⁹⁶

We estimate that the connected stores completed only approximately 113,463 existing home transactions between May 25 to August 8, 2021. In Q2 we directly collected 110,574 transactions and estimate that there were approximately 2,889 more across several cities. These cities were Chengdu, Datong, Tai'an, Urumqi, Deyang, Liangshan, Suining, Quzhou, Yibin, Chengmai, and Pingdingshan.

For Chengdu and Datong two cities, we estimate the number of transactions per store at all other connected stores and multiplied that by the number agents displayed for Chengdu and Datong in the data. To be company favorable, we further assume that both cities are performing 25% above average, and estimate 1,778 transactions in Chengdu and 51 in Datong.

2Q21 Est. Number of Existing Home Transactions for Chengdu & Datong Connected Stores

All connected stores transactions (x-Chengdu, Datong)	110,574	a
Total connected stores on the platform (x-Chengdu, Datong)	35,291	b
Avg # transactions/store for all connected stores (x-Chengdu, Datong)	3.13	c=a/b
Adjustment to assume all Chengdu & Datong stores are performing above average	25%	d
Est. number of transactions per store for Chengdu and Datong	3.92	e=c*d
Chengdu - number of connected stores on the platform	454	f
Datong - number of connected stores on the platform	13	g
Chengdu - estimated number of connected store transactions in 2Q21	1,778	h=f*e
Datong - estimated number of connected store transactions in 2Q21	51	i=g*e

Additionally, in Q2 we identified another 9 minor cities from subsequent data collections and used their Q3 and Q4 data to estimate their number of transactions in Q2. First, we establish the individual proportion of the 9 cities' stores to the total number of stores in the Q4 data (Sept 1- Nov 15), then apply the ratio of the 9 cities' individual number of stores in (x-missing cities) to the total number of stores in the 2Q data (5/25-8/8) collection.

**2Q21 Estimated Number of 9 Cities' Stores & Transactions
As Calculated from 11/30 Data**

City	Est. Number of 9 Cities' Connected Stores as at end of 2Q21	2Q21 Est. Number of 9 Cities' Connected Store Transactions
Tai'an	37	94
Urumqi	36	161
Deyang	32	119
Liangshan	39	145
Suining	51	270
Quzhou	9	46
Yibin	26	97
Chengmai	6	44
Pingdingshan	13	84

*Estimated number of stores based on store count collection from Nov. 2021

After adding these connected stores' existing homes transaction volumes into our data set, we calculated that the connected stores on BEKE's platform completed 113,463 existing home transactions over the 76-day period.

For Shenzhen, Hangzhou, Chengdu, Xian, Hefei, Wuxi, Chengdu, Datong, plus the 9 cities in the table above, we estimate their average transaction value by using the collected data for a similar city, benchmarking the price differential in the reference city and the estimates city using CRE prices average existing home selling price, and

⁹⁶ BEKE 2020 20-F, p.60 "In Beijing and Shanghai, where Lianjia has established significant market penetration, Lianjia is currently the only real estate brokerage brand with presence on Beike platform to guarantee high-quality customer services and strengthen market-leading positions in these two markets."

adjusting accordingly. For small cities where the data contained transaction numbers, but did not include sales price details, we use the CRE average 2Q 2021 averages sales prices for new homes sold in these cities.

2Q21 Adjusted Transaction Values from CRE Price

City	2021 City Tier Rank	Existing Homes (CRE price)	Adjustment to Value per Transaction			
		2Q21 Avg House Listing Price	Reference City	Value per Reference City Transaction	Adjustment based on Avg House Listing Price (%)	Adjusted Transaction Value
Connected Stores						
Shanghai	1st Tier	7,573		4,529		
Shenzhen	1st Tier	8,237	Shanghai	4,529	8.8%	4,926
Suzhou	New 1st Tier	2,733		2,725		
Wuxi	Tier 2	2,290	Suzhou	2,725	-16.2%	2,283
Nanjing	New 1st Tier	3,300		2,584		
Hangzhou	New 1st Tier	4,067	Nanjing	2,584	23.2%	3,185
Wuhan	New 1st Tier	2,253		1,782		
Hefei	Tier 2	2,333	Wuhan	1,782	3.6%	1,845
Xi'an	New 1st Tier	2,420	Wuhan	1,782	7.4%	1,914
Chengdu	New 1st Tier	2,270	Wuhan	1,782	0.7%	1,795
Leshan	Tier 3	630		478		
Deyang	Tier 3	690	Leshan	478	9.5%	524
Suining	Tier 4	677	Leshan	478	7.4%	514
Yibin	Tier 4	657	Leshan	478	4.2%	499
Jinan	Tier 2	1,907		1,595		
Tai'an	Tier 4	1,110	Jinan	1,595	-41.8%	929
Wenzhou	Tier 2	2,723		1,951		
Quzhou	Tier 4	2,023	Wenzhou	1,951	-25.7%	1,449
Haikou	3rd Tier	1,930		1,901		
Chengmai	Tier 4 or below	1,007	Haikou	1,901	-47.8%	992
Zhanghjiakou	Tier 4	927		728		
Datong	Tier 4	767	Zhanghjiakou	728	-17.3%	602
Zhumadian	Tier 3	697		678		
Pingdingshan	Tier 4	667	Zhumadian	678	-4.3%	649

We then use these adjusted transaction values as the estimated/adjusted average price per transaction for the connected stores in the 14 cities and apply them in the 2Q21 GTV estimate for connected stores in the table below.

2Q21 - GTV Estimate for Connected Stores Existing Home Sales (76 Days) with Adjustments

Ref.	City	Number of Transactions	Avg. Price per Transaction Collected (RMB '000)	Estimated/ Adjusted Avg. Price per Transaction* (RMB '000)	Estimated GTV 76 days (RMB '000)	Ref.	City	Number of Stores	Number of Transactions	Avg. Price per Transaction Collected (RMB '000)	Estimated/ Adjusted Avg. Price per Transaction* (RMB '000)	Estimated GTV 76 days (RMB '000)		
1	Ji'an	319	-	1,010	322,190	72	Zhuzhou	115	494	679		335,473		
2	Zhongshan	1,368	1,177		1,610,194	73	Nantong	818	1,246	2,584		3,220,114		
3	Ningbo	1,920	2,019		3,876,218	74	Guangyuan	63	138		850	117,300		
4	Linyi	439	1,231		540,353	75	Chongqing	617	2,773	1,192		3,305,250		
5	Taiyuan	1,069	1,107		1,183,710	76	Zhumadian	67	180	678		122,061		
6	Leshan	312	478		149,228	77	Zhangjiakou	75	190	728		138,295		
7	Qingdao	2,362	1,746		4,124,120	78	Jining	181	662	1,098		726,808		
8	Harbin	1,529	714		1,092,225	79	Jiangmen	79	121	757		91,567		
9	Changsha	2,392	1,108		2,650,158	80	Mianyang	288	795	863		686,396		
10	Wuxi	1,949		2,486	4,845,139	81	Zhaoxing	375	804	1,038		834,456		
11	Guiyang	1,519	874		1,326,976	82	Wuhu	457	1,795		1,500	2,692,500		
12	Zhoukou	393		700	275,100	83	Zhangzhou	346	1,028	1,037		1,065,615		
13	Jiujiang	541	880		476,264	84	Shenzhen	653	575		4,926	2,832,468		
14	Shenyang	2,846	974		2,771,828	85	Zhanjiang	65	110	971		106,760		
15	Hangzhou	3,865		3,185	12,309,129	86	Jinzhou	33	51		830	42,330		
16	Shangrao	483	899		434,075	87	Hohhot	387	1,340	1,031		1,381,565		
17	Hanzhong	447		740	330,780	88	Jingdezhen	39	77		790	60,830		
18	Xiangyang (SX)	685		1,070	732,950	89	Yichang	114	294		970	285,180		
19	Zhenjiang	798	930		741,947	90	Qingyuan	100	184	820		150,790		
20	Changde	260	695		180,753	91	Zunyi	71	163		680	110,840		
21	Nanchang	1,273	1,330		1,692,548	92	Yan'an	23	51		670	34,170		
22	Wafang	639	774		494,841	93	Huai'an	176	550	1,092		600,681		
23	Handan	95		1,090	103,550	94	Yinchuan	426	2,076	769		1,595,427		
24	Kaifeng	369	732		270,139	95	Kunshan	432	2,460	1,901		4,675,250		
25	Anqing	564		840	473,760	96	Weihai	107	229	932		213,515		
26	Huangshi	217	614		133,220	97	Xinxiang	97	295	764		225,396		
27	Meishan	128		800	102,400	98	Fuyang	71	58		1,050	60,900		
28	Nanchong	315	592		186,545	99	Naijiang	46	40		610	29,890		
29	Zhengzhou	2,533	1,366		3,459,732	100	Haikou	158	389	1,901		739,536		
30	Dazhou	140	595		83,230	101	Baotou	320	1,037	655		679,214		
31	Lanzhou	781	1,080		843,110	102	Jilin	51	437	635		277,397		
32	Kunming	1,263	1,253		1,582,300	103	Changzhou	229	591	1,676		990,376		
33	Fuzhou (FJ)	730	2,175		1,587,735	104	Jiuxing	428	1,270	1,537		1,951,585		
34	Luoyang	819	997		816,603	105	Jinhua	84	197	1,997		393,487		
35	Chengdu**	1,778		2,007	3,567,765	106	Beihai	209	577	564		325,343		
36	Zhuhai	945	2,236		2,113,182	107	Ha'an	18	37	1,327		49,090		
37	Dalian	3,184	1,147		3,652,663	108	Taizhou	109	301	1,900		571,993		
38	Xi'an	4,338		2,139	9,279,532	109	Ma'anshan	224	1,049		1,100	1,153,900		
39	Hefei	3,458		2,063	7,132,190	110	Huanggang	37	89		740	65,860		
40	Yueyang	233	637		148,437	111	Hengyang	50	56		680	38,080		
41	Wenzhou	847	1,951		1,652,153	112	Baoding	48	100	925		92,460		
42	Shijiazhuang	1,776	1,261		2,240,010	113	Yongzhou	34	39		630	24,570		
43	Chifeng	377	713		268,965	114	Dongguan	484	464	2,113		980,480		
44	Changchun	1,791	897		1,606,000	115	Taigang	12	47	2,093		98,363		
45	Ganzhou	440		1,390	611,600	116	Changshu	31	87	1,654		143,905		
46	Suzhou	2,961	2,725		8,068,839	117	Pingxiang	29	20		640	12,800		
47	Quanzhou	924		2,570	2,374,680	118	Panzhihua	33	47		620	29,140		
48	Tangshan	712	927		660,236	119	Yancheng	180	306	1,322		404,399		
49	Datong**	51		602	30,660	120	Huzhou	153	583	1,272		741,307		
50	Dali	58		2,020	117,160	121	Luzhou	35	40		720	28,800		
51	Zibo	501	776		388,713	122	Yuncheng	32	22		760	16,720		
52	Jinan	1,652	1,595		2,635,675	123	Tianshui	15	18		920	16,560		
53	Yantai	671	1,004		673,434	124	Jurong	2	1	2,870		2,870		
54	Foshan	1,264	1,569		1,983,813	125	Xinyu	18	18		780	14,040		
55	Guangzhou	1,975	2,697		5,326,830	126	Tongliao	29	125		680	85,000		
56	Dandong	347	579		200,913	127	Lianyungang	82	73		1,570	114,610		
57	Xuchang	309	630		194,690	128	Fuzhou (JX)	25	27		880	23,760		
58	Wuhan	4,212	1,782		7,505,773	129	Yichun	59	83		1,080	89,640		
59	Xiangyang (HB)	564	894		504,214	130	Chengde	15	34		1,010	34,340		
60	Tianjin	5,548	1,592		8,830,048	131	Qidong	2	5	2,298		11,820		
61	Nanjing	2,213	2,584		5,719,191	132	Tai'an	37	94		929	67,685		
62	Xuzhou	926	1,253		1,160,392	133	Urumqi	36	161	808		130,478		
63	Langfang	2,480	1,320		3,274,210	134	Deyang	32	119		524	62,216		
64	Heze	126	745		93,808	135	Liangshan	39	145	852		123,173		
65	Xiangxi***	18		590	10,620	136	Suining	51	270		514	138,455		
66	Nanning	414	1,284		531,697	137	Quzhou	9	46		1,449	66,200		
67	Liaozhou	311	853		265,233	138	Yibin	26	97		499	48,583		
68	Huizhou	889	1,038		922,870	139	Chengmai	6	44		992	43,787		
69	Guilin	275	571		156,904	140	Pingdingshan	13	84		649	54,345		
70	Baoji	260		590	153,400	Sub-total						35,758	113,463	177,169,729
71	Xiamen	1,256	3,672		4,611,982	Additional adjustment								9.66%
Total Estimate														194,284,325

*Estimated value calculation detailed per separate table, otherwise per cre.com's Sept 2021 city's avg listing price

*Estimated value calculation detailed per separate table, otherwise per cfo.com's Sept 2021 city's avg listing price

**Estimated number of transactions, details in separate table

***湘西土家族苗族自治州

Last, we again apply the 9.66% additional adjustment for the timing difference between 2Q21 period and the 5/25 to 8/8 data collection period which increases the GTV estimate from ~177 billion to ~194. Prorating this to 91 days generates a 2Q21 connected store existing home sale GTV estimate of RMB ~233 billion, implying the connected stores' existing home sales GTV was inflated by ~47.2%.

In 3Q21, the Company claimed that its connected stores' existing home sales GTV was RMB 192.9 billion.⁹⁷ We conducted our estimation exercise and approximate BEKE's GTV in 3Q2021. Our program collected 92,004 existing home sales transactions from connected stores from June 30, 2021, to September 13, 2021. We estimate that the connected stores' existing home sales GTV was ~RMB 165 billion, suggesting 17% GTV inflation.

⁹⁷ BEKE 3Q21 6-K, Financial Results

We use the same basic methodology to compose this 3Q21 connected store existing home estimate, but because more of the cities have directly collected data for the number of transactions, fewer estimates were needed.

For Chengdu, we estimated the number of transactions in the same way as was conducted for 2Q21's connected store existing home estimate, including the +25% adjustment to make the estimate conservative and company favorable.

3Q21 Chengdu Connected Stores Est. Number of Existing Home Transactions

All connected stores transactions (x-Chengdu, Pingdingshan)	92,004	a
Total connected stores displayed on the platform (x-Chengdu, Pingdingshan)	37,499	b
Number of Chengdu connected stores displayed on the platform	996	c
All connected stores less Chengdu	36,503	e=b-c-d
Avg # transactions/stores on all connected stores (x-Chengdu)	2.52	e=a/e
Adjustment to assume all Chengdu stores are performing above average	25%	f
Est. number of transactions per store for Chengdu	3.15	g
Estimated number of Chengdu connected store transactions in 3Q21	3,138	h=g*f*c

The average value per transaction for cities for which we were not able to directly collect this data, the same method was applied but Q3 data was used. In this data set, we obtained no pricing data for Wuhan and Guangzhou. As such we substituted these two cities' Q2 directly collected transaction pricing.

3Q21 Adjusted Transaction Values from CRE Price

City	2021 City Tier Rank	Existing Homes (CRE price)	Adjustment to Value per Transaction			
		3Q21 Avg House Listing Price	Reference City	Value per Reference City Transaction	Adjustment based on Avg House Listing Price (%)	Adjusted Transaction Value
Connected Stores						
Shanghai	1st Tier	7,203		4,587		
Shenzhen	1st Tier	8,237	Shanghai	4,587	14.3%	5,245
Suzhou	New 1st Tier	2,833		2,797		
Wuxi	Tier 2	2,347	Suzhou	2,797	-17.2%	2,316
Nanjing	New 1st Tier	3,443		2,467		
Hangzhou	New 1st Tier	4,163	Nanjing	2,467	20.9%	2,983
Wuhan	New 1st Tier	2,207		1,782		
Hefei	Tier 2	2,223	Wuhan	1,782	0.8%	1,795
Xi'an	New 1st Tier	2,227	Wuhan	1,782	0.9%	1,798
Chengdu	New 1st Tier	2,070	Wuhan	1,782	-6.2%	1,672
Leshan	Tier 3	640		499		
Deyang	Tier 3	673	Leshan	499	5.2%	525
Suining	Tier 4	680	Leshan	499	6.3%	530
Yibin	Tier 4	687	Leshan	499	7.3%	536
Jinan	Tier 2	1,900		1,584		
Tai'an	Tier 4	1,220	Jinan	1,584	-35.8%	1,017
Wenzhou	Tier 2	2,700		1,261		
Quzhou	Tier 4	1,943	Wenzhou	1,261	-28.0%	908
Haikou	3rd Tier	2,070		1,929		
Chengmai	Tier 4 or below	1,023	Haikou	1,929	-50.6%	954
Zhanghjiakou	Tier 4	907		687		
Datong	Tier 4	780	Zhanghjiakou	687	-14.0%	591
Zhumadian	Tier 3	687		653		
Pingdingshan	Tier 4	667	Zhumadian	653	-2.9%	634

Notes:

Wuhan's Avg Value per Reference City Transaction originates from the 2Q (5/25-8/22) data set

Units: '000 rmb

3Q21 - GTV Estimate for Connected Stores Existing Home Sales (76 Days: 6/30-9/12) with Adjustments

Ref.	City		Number of Stores	Number of Existing Home Transactions	Average Value per Transaction Collected (RMB '000)	Estimated/ Adjusted Average Transaction Value (RMB '000)	Estimated Existing Home GTV 76 days (RMB '000)	Ref.	City		Number of Stores	Number of Existing Home Transactions	Average Value per Transaction Collected (RMB '000)	Estimated/ Adjusted Average Transaction Value (RMB '000)	Estimated Existing Home GTV 76 days (RMB '000)
1	Ji'an	吉安	143	303		1,010	306,030	71	Xiamen	厦门	646	909	3,645		3,313,492
2	Zhongsan	中山	572	1,086	1,079		1,171,812	72	Zhuzhou	株洲	115	426	661		281,522
3	Ningbo	宁波	869	1,425	2,020		2,878,378	73	Nantong	南通	823	944	1,469		1,386,924
4	Linyi	临沂	296	345	1,177		696,870	74	Guangyuan	广元	63	113		850	96,050
5	Taiyuan	太原	625	1,072	1,122		1,202,761	75	Chongqing	重庆	840	2,142	1,129		2,417,476
6	Leshan	乐山	192	381	499		190,208	76	Zhumadian	驻马店	67	148	653		96,648
7	Qingdao	青岛	660	1,920	1,706		3,275,796	77	Zhangjiakou	张家口	75	156	687		107,106
8	Harbin	哈尔滨	309	1,326	704		933,202	78	Jining	济宁	181	520	1,046		543,829
9	Changsha	长沙	722	2,001	1,078		2,157,502	79	Jiangmen	江门	79	109	686		74,792
10	Wuxi	无锡	573	1,216		2,316	2,816,565	80	Mianyang	绵阳	290	758	830		629,490
11	Guiyang	贵阳	406	1,423	895		1,272,911	81	Zhaoxing	绍兴	375	498	1,420		706,985
12	Zhoukou	周口	110	329		5,768	1,897,672	82	Wuhu	芜湖	458	1,256		1,500	1,884,000
13	Jiujiang	九江	191	472	862		406,810	83	Zhangzhou	漳州	348	781	1,039		811,410
14	Shenyang	沈阳	850	2,345	862		2,022,026	84	Shenzhen	深圳	806	457		5,245	2,396,972
15	Hangzhou	杭州	862	2,639		-	-	85	Zhanjiang	湛江	66	97	891		86,460
16	Shangrao	上饶	210	398	866		344,496	86	Jinzhong	晋中	33	59		830	48,970
17	Hanzhong	汉中	85	413		740	305,620	87	Hohhot	呼和浩特	388	1,200	1,023		1,227,690
18	Xiangyang (SX)	咸阳	210	424		1,070	453,680	88	Jingdezhen	景德镇	39	69		790	54,510
19	Zhenjiang	镇江	166	627	925		580,185	89	Yichang	宜昌	114	268		970	259,960
20	Changde	常德	90	212	662		140,329	90	Qingyuan	清远	100	179	811		145,210
21	Nanchang	南昌	667	1,159	1,304		1,511,544	91	Zunyi	遵义	71	156		680	106,080
22	Weifang	潍坊	200	576	780		449,013	92	Ya'an	雅安	23	51		670	34,170
23	Handan	邯郸	60	107		1,090	116,630	93	Huafan	淮安	176	375	1,125		421,875
24	Kaifeng	开封	162	306	671		205,367	94	Yinchuan	银川	427	1,764	746		1,316,508
25	Anqing	安庆	131	510		840	428,400	95	Kunshan	昆山	432	1,676	1,836		3,076,968
26	Huangshi	黄石	137	182	628		114,220	96	Weihai	威海	108	220	934		205,500
27	Meishan	眉山	69	105		800	84,000	97	Xinxiang	新乡	97	269	758		203,960
28	Nanchong	南充	159	292	555		162,106	98	Fuyang	阜阳	71	87		1,050	91,350
29	Zhengzhou	郑州	839	1,433	1,346		1,928,111	99	Neijiang	内江	46	48		610	29,280
30	Dazhou	达州	107	123	615		75,630	100	Haikou	海口	159	400	1,929		771,514
31	Lanzhou	兰州	239	704	1,042		733,880	101	Baotou	包头	320	893	644		574,943
32	Kunming	昆明	538	1,002	1,210		1,212,277	102	Jilin	吉林	51	434	627		272,254
33	Fuzhou (FJ)	福州	334	610	2,228		1,358,903	103	Changzhou	常州	229	397	1,608		638,368
34	Luoyang	洛阳	280	637	995		633,603	104	Jiaxing	嘉兴	429	917	1,448		1,327,508
35	Chengdu	成都**	996	3,138		1,672	5,245,523	105	Jinhua	金华	84	133	2,217		294,912
36	Zhuhai	珠海	458	699	2,088		1,459,398	106	Beihai	北海	209	499	591		294,981
37	Dalian	大连	595	2,600	1,108		2,880,479	107	Ha'an	海安	18	32	1,198		38,350
38	Xi'an	西安	1,312	3,083		1,855	5,717,796	108	Taizhou	台州	109	261	1,930		503,842
39	Hefei	合肥	892	2,888		2,028	5,856,448	109	Ma'anshan	马鞍山	224	862		1,100	948,200
40	Yueyang	岳阳	102	248	623		154,457	110	Huanggang	黄冈	37	71		740	52,540
41	Wenzhou	温州	318	625	1,845		1,153,115	111	Hengyang	衡阳	50	63		680	42,840
42	Shijiazhuang	石家庄	519	1,572	1,241		1,951,596	112	Baoding	保定	48	85	921		78,323
43	Chifeng	赤峰	115	402	683		274,376	113	Yongzhou	永州	34	46		630	28,980
44	Changchun	长春	416	1,534	916		1,405,022	114	Dongguan	东莞	485	368	1,950		717,600
45	Ganzhou	赣州	257	358		1,390	497,620	115	Taichang	太仓	12	36	1,908		68,700
46	Suzhou	苏州	869	2,414	2,797		6,751,025	116	Changshu	常熟	31	90	1,406		126,520
47	Quanzhou	泉州	400	753		2,570	1,935,210	117	Pingxiang	萍乡	29	17		640	10,880
48	Tangshan	唐山	292	689	892		614,423	118	Panzhihua	攀枝花	33	74		620	45,880
49	Datong	大同	13	2		525	1,050	119	Yancheng	盐城	180	302	1,268		383,007
50	Dali	大理	38	64		2,020	129,280	120	Huzhou	湖州	153	488	1,209		589,963
51	Zibo	淄博	134	444	818		363,270	121	Luzhou	泸州	35	50		720	36,000
52	Jinan	济南	424	1,277	1,584		2,023,200	122	Yuncheng	运城	32	20		760	15,200
53	Yantai	烟台	331	594	1,021		606,617	123	Tianshui	天水	15	19		920	17,480
54	Foshan	佛山	651	1,074	1,491		1,601,319	124	Jurong	句容	2	3	3,157		9,470
55	Guangzhou	广州**	1,049	2,319		2,697	6,254,343	125	Xinyu	新余	18	9		780	7,020
56	Dandong	丹东	48	273	581		158,478	126	Tongliao	通辽	29	105		680	71,400
57	Xuchang	许昌	142	237	618		146,480	127	Lianyungang	连云港	82	69		1,570	108,330
58	Wuhan	武汉	1,367	3,250		1,782	5,791,500	128	Fuzhou (JX)	抚州	25	33		880	29,040
59	Xiangyang (HB)	襄阳	198	492	883		434,624	129	Yichun	宜春	59	76		1,060	80,560
60	Tianjin	天津	1,019	6,390	1,547		9,883,978	130	Chengde	承德	15	25		1,010	25,250
61	Nanjing	南京	715	1,562	2,467		3,853,702	131	Qidong	启东	2	5	2,162		10,810
62	Xuzhou	徐州	316	689	1,158		797,569	132	Ta'an	泰安	23	52		2,983	155,118
63	Langfang	廊坊	369	2,209	1,327		2,931,673	133	Urumqi	乌鲁木齐	30	134	744		99,718
64	Heze	菏泽	83	133	674		89,590	134	Devang	德阳	29	109		5,245	571,707
65	Xiangxi (HN)	湘西***	14	39		590	23,010	135	Liangshan	凉山	26	61	739		45,097
66	Nanning	南宁	270	378	1,191		450,084	136	Suning	遂宁	32	75		530	39,783
67	Liaozhou	柳州	143	263	821		215,941	137	Quzhou	衢州	7	36		1,795	64,637
68	Huizhou	惠州	575	653	978		638,690	138	Yibin	宜宾	20	61		2,316	141,291
69	Guilin	桂林	183	273	558		152,306	139	Chengmai	澄迈	7	26		1,672	43,462
70	Baotou	宝鸡	40	250		590	147,500	140	Pingdingshan	平顶山**	14	70		536	37,494
*Estimated value calculation detailed per separate table, otherwise per pre com's Sept 2021 city's avg listing price.								Total (76 days)		38,509		95,212		136,131,390	

*Estimated value calculation detailed per separate table, otherwise per cre.com's Sept 2021 city's avg listing price.

**Number of transactions in the quarter was not in the collected data, estimate is detailed in separate table.

***Guangzhou, Wuhan, average value per transaction obtained from the 5/25-8/8 data set

****湘西土家族苗族自治州

Together with the Lianjia stores' existing home sales GTV overstatement, our collected data suggests BEKE inflated its existing home sales GTV by 33% in 2Q-3Q 2021.

RMB M	2Q 2021			3Q 2021			2Q-3Q 2021		
	Reported	MW estimate	Inflated%	Reported	MW estimate	Inflated%	Reported	MW estimate	Inflated%
GTV of new home sales by Lianjia and connected	498,300	206,866	141%	410,100	195,358	110%	908,400	402,224	126%
GTV of existing home sales by Lianjia	309,500	216,839	43%	185,300	160,866	15%	494,800	377,706	31%
GTV of existing home sales by connected stores	342,500	232,630	47%	192,900	164,791	17%	535,400	397,421	35%
GTV of existing home sales	652,000	449,469	45%	378,200	325,657	16%	1,030,200	775,126	33%
GTV of home sales	1,150,300	656,335	75%	788,300	521,015	51%	1,938,600	1,177,350	65%

In total, the collected data suggested that BEKE inflated its new home and existing home sales GTV by 65% in 2Q-3Q 2021.

Data Verification Checks

To verify that our collected data was comprehensive, we compared the key metrics from the data we collected from the platform with BEKE's SEC disclosures.

BEKE reported connecting with 278 real estate brokerage brands other than Lianjia.⁹⁸ In our July data collection, we identified 310 brands.

BEKE stated that its Lianjia stores operate in 29 cities in China.⁹⁹ Our collected data captured Lianjia brokerage transaction data in 29 cities.

BEKE reported that its platform includes connected brokerages in "more than 100 economically vibrant cities in China."¹⁰⁰ We collected transaction data from connected and franchise stores with agents for 140 cities, excluding Beijing and Shanghai. Including Beijing and Shanghai we collected transactions from 142 cities.

We also note that BEKE's online website doubles as an MLS and contains listings for over cities around China plus cities in the US, Canada, Japan, Thailand, Singapore, Germany, France, the UK, Australia.¹⁰¹ Our July data collections identified the individual webpages for each of the 241 domestic China websites. Recently this number has declined to 227.

Because BEKE does not claim to have overseas business, we did not investigate the overseas listings.

For mainland China, these cities' store pages did not contain the same level of completeness as other cities. Substantially all of these cities are in lower tier cities, such as 3rd, 4th, 5th tier cities as well as "no tier" cities and "country-level cities." Furthermore, the majority of these cities are missing store listings, agent listings, any property listing and/or transaction information. Some sites redirect back to the BEKE main page. We believe these the vast majority are listing sites only.

In the cases where we found cities serviced by a BEKE agent, the agent was not local but from a neighboring city. For example, in Yangzhou, a Tier 3 city in Jiangsu, the agent listing the new home property works in a store in nearby Zhenjiang. The business license related to this agent is for a store called Deyou Fenghuangcheng Flagship store A.¹⁰² This store and this agent are in our data under the city Zhenjiang. This pattern of coverage was repeated for other small cities and their stores, agents, and/or transaction data could be seen in our data sets. A screen shot of a Yangzhou listing page and the connection to the Deyou Fenghuangcheng agent is below.

To the extent some or any of these cities provide a contribution to total GTV that is not collected and flowing through a neighboring city in the collected data sets, we believe it will very likely be small and will not have a significant impact on our overall estimates.

⁹⁸ BEKE 2020 20-F, p.60

⁹⁹ BEKE 2020 20-F, p.60

¹⁰⁰ BEKE 2020 20-F, p.54

¹⁰¹ BEKE F-1A, dated Nov. 16, 2020, p. 2, "We believe that ACN, from its inception, is similar to the Multiple Listing Service, or MLS, in the United States."

¹⁰² Store name: 德佑凤凰城旗舰 A 店, company name: 镇江市德佑房地产经纪有限公司句容分公司

德佑凤凰城旗舰店A店

DeYOU Fenghuangcheng Flagship store

The agent is listed as a member of the DeYOU Fenghuangcheng store

刘召

从金+1分/贝壳分 502

贝壳新房

扬州

Yangzhou (扬州) is a small city with no existing home and just one new home transaction. It appears to have an agent, but the agent and his associated store DeYOU Fenghuang Cheng Flagship store are in neighboring Zhenjiang.

咨询电话: 4008313162转44913

金奥文昌公馆

别名: 金奥文昌公馆苑, 金奥文昌苑

参考均价 14580元/平(单价) 162-185(万/套)(总价)

最新开盘 2020.10.09

楼盘户型 二居室(1) 三居室(2) 四居室(4) 全部户型

风险提示 贝壳用户风险提示

刘召

从金+1分/贝壳分 502

关注贝壳, 获取金奥文昌公馆更多信息!

现在打开微信扫码关注, 赠送定制专属置业报告

咨询电话: 4008117888转32716

Above: BEKE landing page for Yangzhou, the listing is serviced by a DeYOU agent in neighboring Zhenjiang

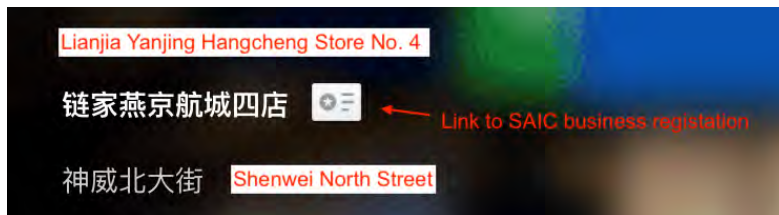
Appendix II: Sanhe Langfang Ghost Store Case Study

In the report, we presented two examples in Sanhe Langfang that show BEKE inflates its store count by having ghost stores at the same location. This Appendix provides additional examples of Ghost Stores that we found:

- **Example 1: Branch No. 10 and No. 79 are also the Same Store**

Branch No. 10 and No. 79 are also co-located but presented as distinct and different stores on BEKE's platform with different store numbers, different branch numbers, and different SAIC business registrations.

On BEKE's platform, both Branch No. 10 and Branch No. 79 are shown with the same vague location description: "Shenwei North Street."



Above: Sanhe Lianjia Yanjiao Branch No. 10 on BEKE's platform, aka Lianjia Yanjing Hangcheng Store No. 4¹⁰³



Above: Sanhe Lianjia Yanjiao Branch No. 79 on BEKE's platform, aka Lianjia Yanjing Hangcheng Store No. 2¹⁰⁴

The use of similar but different store names and the extremely vague store location descriptions and addresses is a common theme on BEKE's platform. It suggests the platform created an ecosystem that was devised to obfuscate, allowing some stores to exist on paper alone.

Further, Branch No. 10 was initially registered in unit 1-1914, which is currently occupied by a Century 21 branch, a connected store held by Zhonghuan. Interestingly, Branch No. 10 changed its registered address from street number 1914 (the current Century 21 location) to 1913 on March 18, 2021. This is another instance where stores move just one or two doors down the street. This move makes little economic sense. Both locations are in the middle of a block, not on a corner, so the new location would provide little to no impact to attract traffic. In addition, moving costs, decorating expense and the impact of business disruption all suggest the move did not happen. We believe Branch No. 10 only changed its registered address to hide its connection with Century 21 or Zhonghuan.

¹⁰³ <https://m.ke.com/store/11018900761765031134.html>, 燕京航城 4 店, Branch 10

¹⁰⁴ <https://m.ke.com/store/10088500751985031478.html>, 燕京航城 2 店, Branch 79

最近浏览

Sanhe City Lianjia Real Estate Brokerage Co, Yanjiao Branch No. 10

三河市链家房地产经纪有限公司燕郊第十分公司 存绿

Legal Rep: ZHANG Jingzhao Est. April 19, 2017

负责人: 张静召 注册资本: - 成立日期: 2017-04-19

电话: 13315618352 邮箱: 563284618@qq.com 官网: -

地址: 河北省廊坊市三河市燕郊开发区神威北路北侧、燕灵路东侧御景豪庭住宅小区19号商业-1-1913

Date of Amendment

序号	变更日期	变更项目	变更前 Before	变更后 After
1	2021-03-18	地址变更 (住所地址、经营场所、驻在地址等变更)	河北省廊坊市三河市燕郊开发区神威北路北侧、燕灵路东侧御景豪庭住宅小区19号商业-1-1914	河北省廊坊市三河市燕郊开发区神威北路北侧、燕灵路东侧御景豪庭住宅小区19号商业-1-1913
2	2020-05-17	负责人变更 带有*标记的方法定代表人	宋兴华	张静召*
3	2020-05-17	经营范围变更	新建房屋买卖代理服务,二手房买卖经纪服务 另经营住所:****。(依法须经批准的项目,经相关部门批准后方可开展经营活动)。	房地产中介服务、房地产经纪服务、房地产居间服务代理(不得从事本市产业政策限制项目)(依法须经批准的项目,经相关部门批准后方可开展经营活动)。
4	2017-07-20	地址变更 (住所地址、经营场所、驻在地址等变更)	河北省廊坊市三河市燕郊高新区燕灵路口西侧福乐园第S3幢1单元0103号	河北省廊坊市三河市燕郊开发区神威北路北侧、燕灵路东侧御景豪庭住宅小区19号商业-1-1914

Above: registration details and changes to the Branch 10



Above: Left, the Century 21 at 1-1914, Right, the Lianjia Store at 1-1913

Because of Lianjia's claims of an extensive national network, we believe Sanhe Langhang's examples indicate a systemic inflation of store and agent counts.

- **Example 2: Sanhe Lianjia Yanjiao Branch Store 51 Does Not Exist**

Branch No. 51 was established around the same time as Branches No. 54–59, those branches explored in another example; it even has the same legal representative and phone number as those branches. It is registered at Zhugedian Village in Yanjiao Town. Yet when we visited the site, we could not find any Lianjia or other real estate brokerage to speak of.

Branch Company Name	Registered Business Address & Location	BEKE Platform Store Name	Physical Location
Sanhe City Lianjia Real Estate Brokerage Co, Yanjiao Branch No. 51	Yanjiao Village, Zhuge Commercial Town	None	No
三河市链家房地产经纪有限公司燕郊第五十一分公司	燕郊镇诸葛店村		

SAIC Registration Information for the SanHe City Lianjia Real Estate Brokerage Co, Yanjiao Branches									
51	12-Jun-17	SONG Xinghua 宋兴华	133-1561-8352, 563284618@qq.com	On file, operating	On file, operating	On file, operating	On file, operation closed	Active	No

No Lianjia Store at the Zhugedian Village



Source: Site Visits, Q4 2021

- **Example 3: SAIC Registrations Show Two Neighboring Lianjia Stores, But One is a Restaurant**

According to the SAIC records, Branch No. 4 and 88 are registered on the same street, only two stores away. We visited these two branches' registered addresses. Yet we only found one Lianjia store (Branch 88). The location where Branch No. 4 should be is actually a restaurant.

No Branch No. 4 But a Restaurant



Source: Site Visits, Q4 2021

The Baidu Map also confirms that the restaurant is located at Branch No. 4's registered address.

The Restaurant Xiang Gu Li 's address on Baidu maps



Source: Baidu Maps

According to a Chinese corporate registration database, Branch No. 4 and No. 88 filed their 2020 annual reports and are supposedly active. Yet, both our site visits and the Baidu Maps indicate that Branch 4 does not exist.

Branch Company Name	Registered Business Address & Location	BEKE Platform Store Name	Physical Location
Sanhe City Lianjia Real Estate Brokerage Co, Yanjiao Branch No. 4	South side of Yanjiao Palace East Street, East side of Minfu Garden, Fuze Yuyuan District, No. 29-08	???	No, address occupied by a restaurant
三河市链家房地产经纪有限公司燕郊第四分公司	燕郊行宫东大街南侧、民福元东侧福泽御园小区29-08号		
Sanhe City Lianjia Real Estate Brokerage Co, Yanjiao Branch No. 88	South side of Yanjiao Palace East Street, East side of Minfu Garden, Fuze Yuyuan District, 1st Floor No. 29-06	???	Yes
三河市链家房地产经纪有限公司燕郊第八十八分公司	燕郊行宫东大街南侧、民福园东侧福泽御园小区29-06号一层		

• Example 4: Missing Sanhe Lianjia Branches are Set up as Deyou Branches

When reviewing Lianjia's SAIC registrations, we found two Lianjia stores that share addresses with two Deyou stores. More importantly, in our site visits we found a Deyou store at one of these physical locations, but not Lianjia.

Branch No. 56, one of the seven Lianjia's, is registered at ShouErYuan TianCheng, District E, building 7, 1st Floor, Unit 1, Suite A1-8 in the Yanjiao New High-Tech Zone in the SAIC records.¹⁰⁵ The same address is also registered with the SAIC by Langfang Wisdom Deyou.

Branch Company Name	Registered Business Address & Location	Parent Co./Owner
Sanhe City Lianjia Real Estate Brokerage Co, Yanjiao Branch No. 56	Yanjiao New High Tech Zone, Yanhsun Rd., East Side, S. Mizhou Branch Line; ShouErYuan TianCheng, Phase 1, District E, Building 7, 1st Floor, Unit 1, Suite A2-6	BEKE (Tianjin) Investment Co. Ltd.
三河市链家房地产经纪有限公司燕郊第五十六分公司	燕郊高新区燕顺路东侧、密涿支线南侧首尔园甜城一期E区一期 第7幢1单元1层A2-6	贝壳（天津）投资有限公司
Langfang Wisdom Deyou Real Estate Agency Co., Ltd.	Yanjiao New High Tech Zone, Yanhsun Rd., East Side, S. Mizhou Branch Line; ShouErYuan TianCheng, Phase 1, District E, Building 7, 1st Floor, Unit 1, Suite A2-6	Pontus Development (Hong Kong) Ltd.
廊坊市智慧德佑房地产经纪有限公司	燕郊高新区燕顺路东侧、密涿支线南侧首尔园甜城一期E区一期 第7幢1单元1层A2-6号	

Deyou is supposedly a franchise brand owned by BEKE, and all Deyou stores should be owned by franchisees.

Deyou

■ We own *Deyou* brand, which is offered under a franchise model for connected brokerage stores that seek for branding effect and access to solutions offered by *Beike* platform. Participating brokerage stores can reduce their operating cost, increase business efficiency and productivity, enhance exposure to updated market news and industry trends, gain access to extensive authentic property listing inventory and be referred to high-quality customer leads on *Beike* platform. They are able to keep the culture of being a small team while enjoying the full-fledged infrastructure of a tremendous platform and cooperating within our extensive store network.

Source: BEKE Prospectus Aug 13, 2021, p. 170

Yet the SAIC records indicate that this Deyou store shares the same registered address with a Lianjia store. This Deyou store registered in the location of a missing Lianjia store appears to be pulling double duty – doubling up as a Lianjia store and being counted as a Deyou store.

¹⁰⁵ 燕郊高新区燕顺路东侧、密涿支线南侧首尔园甜城一期 E 区一期第 7 幢 1 单元 1 层 A2-6

The double duty being pulled at Branch no. 56 is not a single incident. We also found Branch No. 36 and another Deyou store share a same registered address.¹⁰⁶ When we visited, we only the found the Deyou store at that location.

Branch Company Name	Registered Business Address & Location	BEKE Platform Store Name	Physical Location
Sanhe City Lianjia Real Estate Brokerage Co, Yanjiao Branch No. 36	Yanjiao New Development Zone, West side of Yanxing Rd., Xiangxin Store, No. 92	None ???	Occupied by a Deyou franchise store
三河市链家房地产经纪有限公司燕郊第三十六分公司	燕郊开发区燕兴路西侧祥馨门店92号		
Sanhe City ZeAn Real Estate Brokerage Co, Ltd.	Yanjiao New Development Zone, West side of Yanxing Rd., Xiangxin Store, No. 92	???	Yes
三河市泽安房产经纪有限公司	燕郊开发区燕兴路西侧祥馨门店92号		

Found Deyou Store at Lianjia Store's Registered Address



As discussed earlier in this report, Lianjia stores and Deyou franchise stores present very different economic contributions to BEKE. All of the commissions collected by Lianjia stores are reported on a gross basis, while only a small percent of the commissions generated by Deyou stores plus some other possible fees flow to BEKE from Deyou operations. Therefore, changing from a Lianjia to a Deyou store is not a matter of rebranding, but one of economics – directly impacting commission revenue.

¹⁰⁶ 三河市泽安房产经纪有限公司, 燕郊开发区燕兴路西侧祥馨门店 92 号