Ke Holdings (BEKE US)

Beke After Ten Seasons; Initiate with Buy

How many roads a man must walk to become a man? The financial crisis in 2008 (new home sales -19% YoY) was the first life or death test for Lianjia but it pulled through the challenging four seasons via anti-cycle store opening to boost top line. Then China's rolling out RMB4tn stimulus in 2009 made Lianjia the distant market leader. 2Q21-3Q22 were the next six seasons when everything went against BEKE (founder's passing away, developers defaults, hard landing in property market (-30% YoY), commission rate cap risk and what's not). It still survived comfortably with RMB1.3bn net profits in 9M22 and net cash of RMB60bn (incl. ST investments), partly thanks to visionary ACN platform. Forward looking, **We recommend Buy on BEKE** as 1) In ST, BEKE is the key beneficiary of fast existing home sales recovery and commission rate cap overhang lifted. 2) In LT, its dominate advantage in its online-offline ACN can further widen the gap via steady and meaningful service fee and NP contribution at 15%. Also Shengdu is on the right track to build synergy and narrow the loss in 2023E. So all in all, we expect BEKE to deliver RMB5.6/7.0bn NP in 2022/23E (10%> consensus). **Catalysts:** 4Q22 beat; policy relaxation in Tier 1 cities. **Risk:** Commission rate cap <2%. Antitrust investigation.

- **BEKE is best positioned to benefit better-than-expected existing home sales in 2023E:** We expect a sharp recovery in existing home market to rise 17% YoY due to 1) stronger demand-boost policies to be initiated in Tier 1 cities. 2) New home's delivery and quality issue are still pushing buyers to prefer the second-hand market. 3) Supply in existing home market may continue to spike after this wave of COVID casualties. This is evidenced by the strong existing home sales pick up of major eight cities in 3Q/4Q 2022 (+26%/+34% YoY) after -30% in 1Q/2Q. Therefore, we forecast BEKE's existing home GTV to gain 20% YoY. As for new home sales, we expect BEKE to deliver flattish GTV as the industry is still facing supply shortage and buyers' confidence drop (but bad debt is improving)

- **Overhang almost lifted on better-than-feared commission rate cap:** BEKE's underperformance vs. other platform names (BABA, MEITUAN, JD) was mainly due to the rumoured commission rate cap to be set at 2% (BEKE's 2.4%). However, this overhang has been almost lifted after the latest news said the cap will be in a range of 2-2.5%. This means each city could determine its own rate and the blended rate is more towards 2.25% rather than 2%. Also, our sensitivity shows the impact of having a 2% commission rat cap on DCF is only 10%, which is limited.

- **Proven ACN ecosystem gradually becomes key profit contributor**: The resilient service fee contribution and high margin (80%+ CM) helped BEKE pass through the difficult 2022E (we estimate NP contribution of 35%). The truth is that our calculation shows ACN helped connected stores to achieve more resilient GTV in a bad year and aggressive one in a good year. With existing home market recovery, we expect 20% service fee YoY in 2023E.

- **Shengdu Furniture's ramp up takes time but less a drag now:** Due to the turnaround of existing home market and acceleration of home delivery in 2023E (+10% YoY), we expect Shengdu to narrow the net loss in 2023E vs. -RMB800mn in 2022E. More importantly, Shengdu's synergy with Beke has been proven in Beijing where is Lianjia's home court that helped divert clients to achieve breakeven in 3Q22. However, it still takes time to prove in other cities as the market size and efficiency are less than that in Beijing.

- **Initiate at Buy with TP of USD23.3/share:** We expect BEKE to deliver RMB5.6/7.0bn NP in 2023/24E (10% > consensus) mainly on higher growth assumption in existing home sales and less loss in Shengdu. Our TP is equivalent to34/27x 2023/24E PE (historical mean at 38/34x) or 1x 2024E PEG, similar to internet platform names' current valuation at 1x PEG.

BUY

Target Price	**US$23.30**
Up/Downside	**28.2%**
Current Price	**US$18.17**

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Stock Data

Mkt Cap (US$ mn)	21,495.8
Avg 3 mths t/o (US$ mn)	14.0
52w High/Low (US$)	22.86/9.00
Total Issued Shares (mn)	1183.0

Source: FactSet

Shareholding Structure

Propitious Global	23.3%
Tencent Mobility	10.0%

Source: HKEx

Share Performance

	Absolute	Relative
1-mth	23.7%	26.1%
3-mth	29.7%	23.6%
6-mth	20.7%	24.3%

Source: FactSet

12-mth Price Performance

Source: FactSet

Earnings Summary

(YE 31 Dec)	FY20A	FY21A	FY22E	FY23E	FY24E
Revenue (RMB mn)	70,481	80,752	58,744	69,515	76,594
YoY growth (%)	53.2	14.6	(27.3)	18.3	10.2
Net profit (RMB mn)	2,613.5	(524.1)	(1,920.2)	2,551.1	3,947.5
Adjusted net profit (RMB mn)	5,719.7	2,294.0	1,965.1	5,647.0	7,047.2
Adj. NP (consensus; RMBmn)			1,814.5	5,117.8	6,572.2
EPS (Adjusted) (RMB)	3.60	7.71	1.94	1.65	4.75
P/E (x)	27.5	72.0	79.6	27.7	22.3
P/B (x)	2.8	2.9	2.2	2.0	1.8
ROE (%)	5.3	(0.8)	(2.9)	3.6	5.2
Net gearing (%)	(61.4)	(30.1)	(34.5)	(42.5)	(50.1)

Source: Company data, Bloomberg, CMBIGM estimates

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Figure 1: Beike: summary of key forecast

(RMBtn)	2021	2022E	2023E	2024E
GTV	**3.9**	**2.6**	**3.0**	**3.3**
Growth (YoY%)	10.1%	-33.1%	15.0%	10.3%
Existing home transaction	2.1	1.6	1.9	2.1
Growth (YoY%)	6.1%	-24.2%	20.3%	12.8%
New home transaction	1.6	0.9	0.9	0.9
Growth (YoY%)	16.3%	-43.0%	1.1%	2.2%
Emerging and other services - old disclosure	0.2	0.1	0.2	0.2
Growth (YoY%)	5.9%	-45.5%	58.7%	27.2%
1) Home renovation and furnishing		0.01	0.01	0.01
Growth (YoY%)			59.9%	15.1%
2) Emerging and other services - new disclosure		0.1	0.2	0.2
Growth (YoY%)			58.6%	28.0%

(%)	2021	2022E	2023E	2024E
Blended monetization rate				
Existing home transaction (revenue/GTV)	1.6%	1.5%	1.6%	1.6%
New home transaction (revenue/GTV)	2.9%	3.0%	3.0%	3.0%

(RMBbn)	2021	2022E	2023E	2024E
Revenue	80.8	58.7	69.5	76.6
Growth (YoY%)	15%	-27%	18%	10%
Existing home transaction	31.9	24.2	30.3	34.6
Growth (YoY%)	5%	-24%	26%	14%
New home transaction	46.5	27.5	27.8	28.4
Growth (YoY%)	22%	-41%	1%	2%
Emerging and other services - old disclosure	2.3	7.1	11.4	13.6
Growth (YoY%)	18%	204%	61%	19%
Gross profit	15.8	12.9	17.2	19.9
Operating profit	(1.4)	(1.6)	2.4	4.2
Contribution profit	22.6	18.3	23.3	26.4
Non-GAAP net profit	2.3	2.0	5.6	7.0

(%)	2021	2022E	2023E	2024E
Gross margin	19.6	21.9	24.8	25.9
S&M expense ratio	5.3	7.3	7.0	6.8
R&D expense ratio	4.0	7.0	6.2	5.9
G&A expense ratio	11.1	10.2	8.2	7.7
Operating profit margin	(1.7)	(2.7)	3.5	5.5
Contribution profit margin	28.0	31.1	33.5	34.4
Non-GAAP net profit margin	2.8	3.3	8.1	9.2

Source: Company data, CMBIGM estimates

Study of Bull and Bear cases

Figure 2: Our risk-reward analysis

Scenarios	Key assumptions	DCF-derived PE multiple	TP (USD/share)	Upside (downsdie)
Bear case	1. China existing market will see less-than-expected recovery in 2023E (+10% YoY) but new home market remains challenging on supply and confidence issue (-15% YoY) 2. Commission rate cap will be set in 2%	18x 2024E PE or 0.7x PEG	15.4	-14%
Base case	1. China existing market will see quick recovery in 2023E (+17% YoY) but new home market remains challenging on supply and confidence issue (-10% YoY) 2. Commission rate cap will be set in 2-2.5% with the flexibility of city by city	27x 2024E PE or 1x PEG	23.3	28%
Bull case	1. China existing market will see quicker-than expected recovery in 2023E (sales +25% YoY) and new home sales may achieve 0-5% growth 2. Commission rate cap will not be mentioned	35x 2024E PE or 1.3x PEG	30.3	68%

Source: CMBIGM estimates

Investment thesis

In the short term:

Beke is best positioned to benefit from fast existing home sales recovery in 2023E

2022 could be the worst year for the property market with new home sales (-30% YoY) and existing home sales (-25% YoY) mainly due to pandemic and numerous developers' defaults. For 2023E, we are more positive to see fast recovery in existing home sales driven by the turnover rate recovery and natural existing home size growth. The key reasons are 1) stronger demand-boost policies (down payment cut or restrictions lifting in major cities, even selective Tier 1 cities. For example, there are news saying Guangzhou may announce several relaxing measures to cut down payment. 2) New home's delivery and quality issue are still pushing buyers to prefer second-hand market. 3) Supply in existing home market may continue to spike after this wave of COVID casualties. This is evidenced by the strong existing home sales pick up of major eight cities in Q3/Q4 2022 (+26%/+34% YoY) after -30% in 1Q/2Q. Based on our model, we estimate 2023E existing home sales to grow 17% (higher than street's 10%), backed by 4% YoY in the existing home size and 15% YoY improvement in turnover rate. For turnover rate, our assumption is 1.4% vs. 1.3% in 2022E but still much lower than that in 2021 and before (1.7%+).

As the distant market leader, BEKE will be the key beneficiary which is expected to deliver 20% GTV YoY growth in existing home sales. In a breakdown, we forecast Lianjia brand to outperform at +23% YoY due to its higher efficiency, and other connected stores (+18% YoY).

Figure 3: Existing home GTV forecast (2023E +17% YoY)

Year	housing value (RMB bn)	Turnover rate	market (RMB bn)	YoY
2016	191,889	3.0%	5,700	
2017	215,115	2.4%	5,200	-9%
2018	254,781	2.2%	5,700	10%
2019	293,340	2.0%	5,900	4%
2020	328,823	2.0%	6,500	10%
2021	354,702	1.7%	6,200	-5%
2022E	360,439	1.3%	4,650	-25%
2023E	376,111	1.4%	5,435	17%
2024E	391,950	1.5%	6,036	11%
2025E	403,196	1.6%	6,451	7%
2026E	413,423	1.6%	6,739	4%
2027E	423,843	1.7%	7,036	4%
2028E	434,458	1.7%	7,342	4%
2029E	444,720	1.7%	7,649	4%
2030E	455,132	1.8%	7,965	4%

Source: CMBIGM estimates

As for the new home market, we forecast overall GTV to continue falling 10% YoY in 2023E after a YoY decline of 29% in 2022. The key reasons are mainly due to lack of sellable resources dragged by -30% YoY in 2022 land acquisitions, still weak macro and home buyers' confidence. For Beke, we expect its GTV to achieve flattish 2023E, outperforming the market.

Figure 4: New home GTV forecast (2023E -10% YoY)
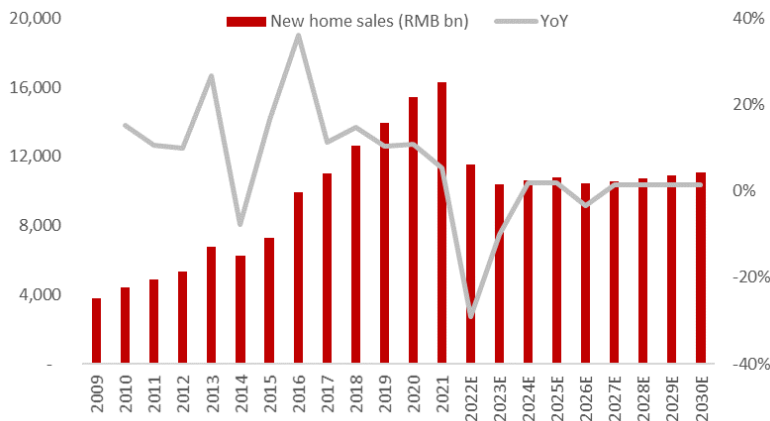
Source: CMBIGM estimates

There are different market participants with different business models in China's housing related industry, including brokerage services providers and service providers in other housing related industry, which consists of online players, offline players, and integrated online and offline platforms. Top five players in the market together accounted for c. 14.6% of total GTV in 2021, per CIC, and Beike took the lead with 9.7% of total market share, in our view indicating strong market leadership. In our view, Beike's competitive edge lies in its strong industry know-how, superior customer service capability, online and offline integration capability, and strong network effect based on technology and ACN network, which are hard to replicate for its competitors. Existing home GTV transacted on Beike's platform represented 29.4% of the industry total in 2021, up from 12.6% in 2018. We expect Beike's market share in existing home transaction business to further expand to 31.0% in 2024E, aided by Beike's scale effect and superior services capability.

Commission rate overhang almost lifted to boost re-rating

Despite massive property-related policy to boost market, BEKE has underperformed both property sector and internet platform names (BABA, JD, MEITUAN) by 12% since reopening (1 Dec 2022). The key reason behind was mainly due to the fear that the government may set a commission rate cap for existing home sales at 2%. Compared to Lianjia's 2.4%, it is estimated to have 20% impact on 2023E net profits based on our sensitivity analysis (Chart below).

Figure 5: Sensitivity analysis on commission rate cap

Commission rate	2023E	2024E	2023E	2024E
RMB mn			Difference vs. base case	
Base case: 2.4%	5,647	7,047		
2.0%	4,542	5,762	-20%	-18%
2.1%	4,818	6,083	-15%	-14%
2.2%	5,095	6,405	-10%	-9%
2.3%	5,371	6,726	-5%	-5%
2.4%	5,647	7,047	0%	0%
2.5%	5,647	7,047	0%	0%

Source: CMBIGM estimates

However, this overhang has been almost lifted after the latest news said the cap will be in a range of 2-2.5%. This would imply each city has the flexibility to determine its own rate and so the blended rate is more towards 2.25% or even no change rather than 2%. So we think this would add more certainties to its earnings recovery and premium-service differentiation vs. other agency companies. Our 2023/24E NP forecast are RMB5.6/7.0bn, 10% higher than the street.

In the mid-to-long term:

Proven ACN ecosystem gradually becomes key profit contributor

China's housing transactions and services industry faces key challenges that need to be effectively addressed, such as lack of infrastructure and lack of cooperation mechanism for agents, which lead to low efficiency. Leveraging industry know-how and word-of-mouth generated from the operation of Lianjia over past 20 years, Beike established ACN, through which it opened up its infrastructure to connected brands, and stimulates cooperation among agents by ensuring fair compensation, which successfully improved transaction efficiency and accumulated strong network effect, and lays solid foundation for future development.

The service fee from its ACN has provided BEKE a resilient revenue even in the property downcycle. Especially given its high margin (80%+ CM), we estimate ACN's contribution to 2022E NP at 35%. With existing home market recovery, we expect Beke to further boost its connected/franchise store numbers (+20% YoY). The reason why we think agency is willing to join ACN in an up or down cycle has been proven in the chart below (more defensive in the bad year and simiar/faster growth in the good year). So This could help drive the monetisation of ACN to deliver steady 20% growth and contribute 15% of 2023E NP, in our view.

**Figure 6: Efficiency of ACN-connected brands: more defensive in 2022E**

EHT GTV per store (RMBmn)	2018	2019	2020	2021	2022E
Total	52.0	34.6	41.3	40.3	35.8
Lianjia	102.2	108.0	129.7	141.7	118.8
Connected brands	4.6	14.9	23.7	23.4	21.9
YoY					
Lianjia		6%	20%	9%	-16%
Connected brands		224%	59%	-1%	-6%

Source: Company data, CMBIGM estimates

Shengdu furniture's ramp up takes time but less a drag now

On the renovation demand in 2023E, we expect a much better picture as two major demand drivers are turning positive. Firstly, as mentioned, 2023 is the year to see quick existing home sales recovery (+17% YoY). Also, the new home delivery is estimated to grow 10% YoY in 2023E, helped by the completion push by the government (The total funding may exceed RMB350bn, equivalent to completion target of 150mn sqm or 20% of 2021). Therefore, we expect Shengdu's 2023E net loss to narrow 2023E loss vs. -RMB800mn in 2022E. More importantly, Shengdu's synergy with Beke has been proven in Beijing where is Lianjia's home court that can help divert clients to achieve breakeven locally in 3Q22. However, it still takes time to prove in other major cities as the market size and efficiency are less than that in Beijing.

In a longer term, China's home renovation market has large market size but is highly fragmented. Per CIC, market size of home renovation and furnishing in China reached RMB6.9tn in 2021, representing a 2016-2021 CAGR of 8.9%, and is expected to grow further to RMB10.4tn in 2026 with a 2021-2026 CAGR of 8.6%. However, the top 5 players in the market accumulatively accounted for less than 5% of the market share in 2021. If Beike can leverage its proven "vertical to horizontal" playbook to standardize and digitalize home renovation industry, it has the potential to consolidate market and duplicate its success in housing transaction industry. However, Beike's home renovation and furnishing business is still in investment growth stage, and the development may take time to bear fruit. Currently we forecast the Shengdu to achieve breakeven in 2024.

Figure 7: China: home renovation and furnishing market size
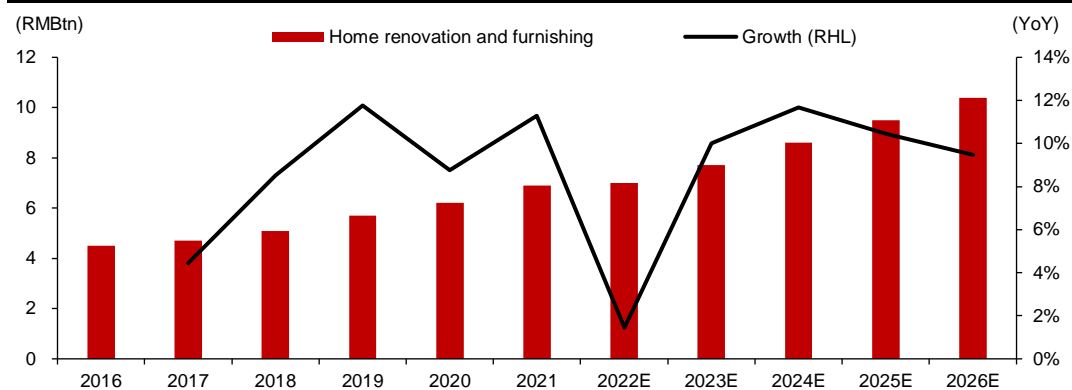
Source: CIC, CMBIGM

Valuation and industry comparison

SOTP based valuation of USD23.3 per ADS

Our sum of the parts (SOTP) method values Beike at USD23.3 per ADS, which is made up of: 1) USD22.3 per ADS for Beike's core housing transaction business, assuming WACC of 10.5% and terminal growth of 2.5%; and 2) USD1.0 per ADS for Shengdu, based on the RMB8.0bn Beike paid for the acquisition of Shengdu. Our target price translates into 33.9x 2023E PE and 27.2x 2024E PE under non-GAAP, and 2.8/2.5x 2023/2024E PS.

We employ sum of the parts (SOTP) valuation method to value Beike given that core housing transaction business has a different margin profile with home renovation business, and the home renovation business is poised for nationwide expansion to support long-term growth, which is likely to be in loss-making stage over 2022-2023. We use DCF to value Beike's core business, as we believe the company has built a strong network effect, levering its data technology and ACN, which could support steady cash flow generation in the long-term.

Figure 8: Beike Core: DCF valuation, WACC of 10.5%, terminal growth of 2.5%

(RMBmn)	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
NPV of FCF	51,474	49,345	45,811	41,773	35,089	28,716	19,998	11,198
Discounted terminal value	71,661							
Enterprise value	123,135							
Net cash	60,199							
Equity value	183,334							
No. of ADS (diluted, mn)	1,188							
Valuation per ADS (USD)	22.3							

Source: Company data, CMBIGM estimates

Figure 9: Beike: SOTP valuation

(RMBmn)	2023E
Beike Core	183,334
Shengdu	8,000
Total Beike valuation	191,334
Total Beike valuation (USDmn)	27,730
Valuation per ADS	**23.3**

Note: Our exchange rate assumption is RMB:USD=6.9:1
Source: Company data, CMBIGM estimates

Figure 10: Internet valuation comps table

Company	Ticker	Rating	PE (x) 2022E	2023E	2024E	PS(x) 2022E	2023E	2024E	EPS CAGR 22-24E	PEG 23E	24E
Platform											
Beike	BEKE US	BUY	79.6	27.7	22.3	2.8	2.4	2.2	89%	NA	0.8
Alibaba Group	BABA US	BUY	16.0	14.9	12.9	2.4	2.1	1.9	11%	1.3	1.1
Tencent	700 HK	BUY	26.6	22.2	19.0	5.5	5.0	4.4	18%	1.2	1.0
Baidu	BIDU US	BUY	16.0	14.6	12.6	2.6	2.4	2.1	12%	1.2	1.0
Meituan	3690 HK	BUY	NA	76.6	33.8	4.2	3.3	2.7	NA	NA	NA
JD.com	JD US	BUY	27.0	23.8	18.7	0.6	0.6	0.5	20%	1.2	0.9
Average			**21.4**	**30.4**	**19.4**	**3.1**	**2.7**	**2.3**	**16%**	**1.2**	**1.0**
E-commerce and local life services											
Alibaba Group	BABA US	BUY	16.0	14.9	12.9	2.4	2.1	1.9	11%	1.3	1.1
JD.com	JD US	BUY	27.0	23.8	18.7	0.6	0.6	0.5	20%	1.2	0.9
Pinduoduo	PDD US	BUY	28.6	25.3	21.4	6.4	5.1	4.3	16%	1.6	1.4
Meituan	3690 HK	BUY	NA	76.6	33.8	4.2	3.3	2.7	NA	NA	NA
VIPShop	VIPS US	Not Rated	10.6	10.2	9.7	0.6	0.6	0.6	5%	2.2	2.1
Average			**20.5**	**30.2**	**19.3**	**2.8**	**2.3**	**2.0**	**13%**	**1.6**	**1.4**
Games											
Tencent	700 HK	BUY	26.6	22.2	19.0	5.5	5.0	4.4	18%	1.2	1.0
NetEase	NTES US	BUY	18.1	17.5	15.8	4.1	3.8	3.4	7%	2.5	2.3
Kingsoft	3888 HK	Not Rated	88.0	57.5	33.9	4.6	3.8	3.2	NA	NA	NA
XD Inc	2400 HK	Not Rated	NA	NA	27.4	3.4	2.5	2.0	NA	NA	NA
Average			**44.2**	**32.4**	**24.0**	**4.4**	**3.8**	**3.3**	**13%**	**1.9**	**1.7**
Social entertainment											
Kuaishou	1024 HK	BUY	NA	NA	34.9	3.0	2.6	2.2	NA	NA	NA
Bilibili	BILI US	BUY	NA	NA	NA	3.5	2.9	2.4	NA	NA	NA
TME	TME US	BUY	23.1	21.0	18.8	3.7	3.5	3.3	11%	1.9	1.7
Cloud Village	9899 HK	BUY	NA	NA	29.1	2.1	1.7	1.4	NA	NA	NA
China Literature	772 HK	Not Rated	27.7	22.7	19.4	4.3	3.9	3.5	20%	1.2	1.0
Average			**25.4**	**21.9**	**25.6**	**3.3**	**2.9**	**2.6**	**15%**	**1.5**	**1.4**
Advertising											
Baidu	BIDU US	BUY	16.0	14.6	12.6	2.6	2.4	2.1	12%	1.2	1.0
Weibo	WB US	BUY	9.9	9.3	8.4	2.6	2.6	2.4	8%	1.1	1.0
Average			**12.9**	**12.0**	**10.5**	**2.6**	**2.5**	**2.3**	**10%**	**1.1**	**1.0**
OTA											
Trip.com Group	TCOM US	BUY	NA	39.1	22.3	8.2	5.4	4.2	NA	NA	NA
TCEL	780 HK	BUY	78.5	30.8	22.8	5.6	4.1	3.4	NA	NA	NA
Average			**78.5**	**34.9**	**22.5**	**6.9**	**4.8**	**3.8**	**NA**	**NA**	**NA**
Online healthcare											
Ali Health	241 HK	Not Rated	NA	NA	92.6	3.4	2.8	2.3	NA	NA	NA
JD Health	6618 HK	Not Rated	NA	88.9	62.8	4.4	3.2	2.5	39%	2.3	1.6

Pingan Healthcare	1833 HK	BUY	NA	NA	NA	3.4	2.9	2.5	NA	NA	NA
Average			**NA**	**88.9**	**77.7**	**3.7**	**3.0**	**2.4**	**39%**	**2.3**	**1.6**
Overall average			*28.5*	*31.3*	*25.6*	*3.6*	*3.0*	*2.6*			

Note: as at 13 Jan 2023 market close
Source: Bloomberg, CMBIGM estimates

Figure 11: Beike: PS band

Source: Wind, CMBIGM

Risks

Antitrust investigation risk

In 2021/22, many investors worried about BEKE's market share in existing and new home market that could bring regulators' attention. As for 2023E, we think the risk should be much less than before as 1) the overall regulation risk is fading, evidenced by other platform names. 2) The meaning of BEKE's ACN is to better match buyers and sellers and thus boost the transaction volume. Given that government's first priority is to stabilize property market, we think they will not target ACN in the near term. 2) There is already a potential regulation on commission rate cap that could affect BEKE's business.

Commission rate cap lower than expected

As mentioned above, the latest news indicates cap rate for existing home commission rate will be set in a range of 2-2.5% and each city can have its own flexibility. If that were the case, the general impact to Beke would be minimal. However, if the final version came out as 2% or even below 2%, that could hurt BEKE's 2023/24E net profits by more than 20%. Based on our channel check, the probability is quite low mainly because 1) the rationale behind is that lowering commission rate is to boost transaction volume. However, firstly there is no strong connection between these two. Secondly. 2) The market itself will adjust based on the supply and demand.

Housing market is seeing a rising penetration in brokerage services

Penetration of brokerage services in housing transaction market continues rising trend

Given the high value and complex nature of housing transactions in China, brokerage service is an important part of the process to guide home buyers and sellers through the transaction. Real estate agents in China can provide a broad range of services from initial engagement to closing, which makes them a crucial part of the housing transactions and services market. Real estate developers also look to brokerage service providers to locate potential buyers and tenants more effectively and to close transactions more smoothly.

Overall brokerage services penetration for China's housing transaction market reached 49.4% in 2021 (2016: 43.2%), with new home sales/existing home sales/home rentals reaching 31.9/88.7/55.7%, compared to 14.5/86.4/45.5% in 2016, based on CIC data and our calculation. We expect overall brokerage service penetration to increase to 58.6% in 2024E, driven by consumer's increasing demand for quality services, and developer's increasing demand for faster cash turnover.

Figure 12: China: penetration of brokerage services
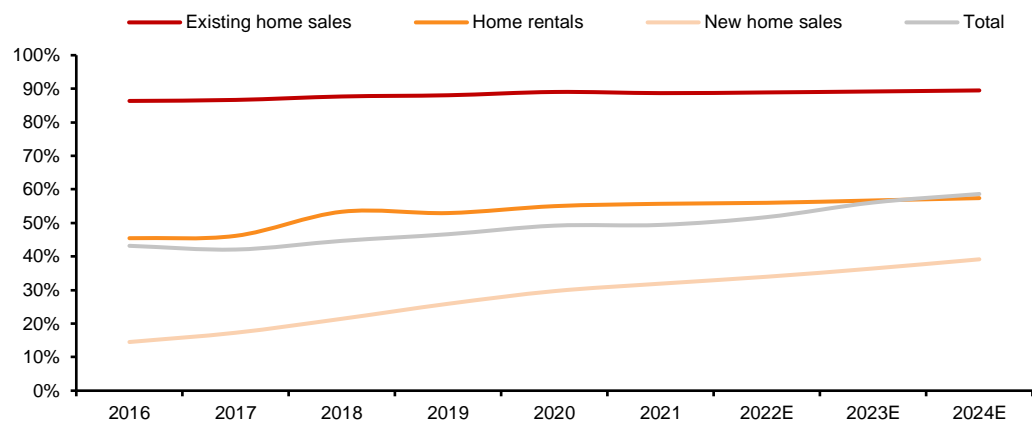
Source: CIC, CMBIGM estimates

Existing home sales: As market supply and demand move closer to balance and average sales period lengthens, existing home buyers and sellers increasingly rely on brokerage service providers for matching, negotiation and other capabilities. We expect penetration of brokerage services in existing home sales to increase to 89.5% in 2024E.

New home sales: We expect penetration of brokerage services in new home sales to rise to 34.0/36.4/39.2% in 2022/2023/2024E, driven by: 1) increasing demand from developers to improve sell-through and cash cycles; and 2) increase in value-add that brokerage services providers can offer, such as extensive network coverage, precise customer recommendations, and effective customer conversion.

Home rentals: Given that rental properties normally differ greatly in terms of location, maintenance and quality, and the landlords and tenants usually have specific needs, home rentals need professional brokerage services to precisely match the tenants with landlords, and this has led to an increase in penetration. We expect penetration of brokerage services in home rental to increase to 56.0% in 2022 and further to 57.4% in 2024E.

Beike: effectively addressed industry pain points with strong infrastructure

China's housing transactions and services industry faces key challenges that needs to be effectively addressed, such as lack of infrastructure and lack of cooperation mechanism for agents, which lead to low efficiency. Leveraging industry know-how and word-of-mouth generated from the operation of Lianjia over past 20 years, Beike established ACN network, through which it opened up its infrastructure to connected brands, and stimulates cooperation among agents by ensuring fairly compensation, which successfully improved cooperation efficiency and accumulated strong network effect, and lays solid foundation for future development. Beyond housing transaction, Beike unveiled its "One-body, Two Wings" strategy by end-2021, and expected the robust development of home renovation & furnishing services, and home rental services to drive its long-term revenue and earnings growth.

For core housing transaction services, Beike has established strong competitive advantage, in our view, aided by its strong industry know-how, superior customer service capability, online and offline integration capability, and strong network effect based on technology and ACN network. For home renovation and furnishing business, it is still in investment growth stage, and likely takes time to bear fruit, in our view. Currently we forecast the Shengdu to achieve breakeven in 2024.

Housing industry: key challenges need to be effectively addressed

Although having achieved rapid development over the past years, China's housing transactions and services industry still faces some key challenges that needs to be effectively addressed, including: 1) lack of infrastructure for the industry; 2) lack of cooperation mechanism for agents; 3) lack of experienced brokerage services providers.

Lack of industry infrastructure. In China, the infrastructure for the housing transactions and services industry had been underdeveloped, which led to duplicate and fraudulent property listings with inaccurate or outdated property and pricing information. Also, it is not uncommon for housing customers to engage multiple agents for one housing transaction, which likely hampers transaction efficiency.

Lack of cooperation mechanism for agents. China's housing transaction and services industry is highly fragmented, and agents and brokerage stores often engage in fierce competition for listing and customer resources. Per CIC, there were approximately 2mn agents in China and over 250,000 brokerage stores as of 31 December 2020. As industry lacks of effective mechanisms for agents to be properly incentivized based on their respective roles, agents are not willing to cooperate, which results in overall transaction efficiency and service quality.

Lack of experienced brokerage services providers. Owning to the intense competition in highly fragmented market, productivity of agents in China is low, and this leads to lower and less stable average income and higher turnover rate. According to CIC, the median industry experience in China was less than two years in 2020, compared to approximately eight years for agents in the U.S, and only less than 20% of agents in China have bachelor's degree or above, compared to 51% in the U.S. The lack of experience, relative training, and coaching resulted in inconsistent agency service quality in the industry.

## Beike: empowering the digital transformation of housing transaction

Beike is the leading integrated online and offline platform for housing transactions and services. It is a pioneer in building infrastructure and standards to reinvent how service providers and housing customer efficiently navigate and complete housing transactions in China, ranging from existing and new home sales, home rentals, to home renovation and furnishing, and other services. Beike owns and operates Lianjia, China's leading real estate brokerage brand, which was launched in 2001. Leveraging the more than 20 years of operating experience through Lianjia, Beike continues to strengthen its industry know-how and focuses on deploying industry infrastructure to improve the quality and efficiency of housing transaction services.

Figure 13: Beike: key development milestones

Year	Milestones
2001	Commenced operations in 2001 through Beijing Lianjia.
2004	Became the first player in the industry to propose tripartite agreements in housing transactions.
2008	Pioneered to introduce Housing Dictionary, which has become the largest and most comprehensive residential housing database in China.
2010	Became the first player in the industry to develop and offer comprehensive SaaS systems.
2011	Introduced and advocated the standards of "authentic property listings" in China and launched the first ACN in the industry.
2011-2015	Expanded its national footprints to 24 major cities in China.
2016	Completed its Series B financing arrangement, raising gross proceeds of RMB2.6 billion.
2017	Completed its Series C financing arrangement, raising gross proceeds of RMB8.7 billion.
2018	Launched its Beike platform, introduced virtual reality experience to the housing transactions and services industry in China and completed our Series D financing arrangement, raising gross proceeds of USD1.6 billion.
2019	Completed its Series D+ financing arrangement, raising gross proceeds of USD1.4 billion.
2020	Completed its initial public offering and listing on the NYSE as well as a follow-on offering
2022	Completed the acquisition of Shengdu and Shengdu became a wholly-owned subsidiary of the Company.

Source: Company data, CMBIGM

According to CIC, Beike is China's largest housing transaction and services platform and a world's top three commerce platform across all industries, in terms of GTV in 2021. The company has built and operated the first integrated online and offline housing transactions and services platform at scale in China.

**Figure 14: Beike platform: business layout**
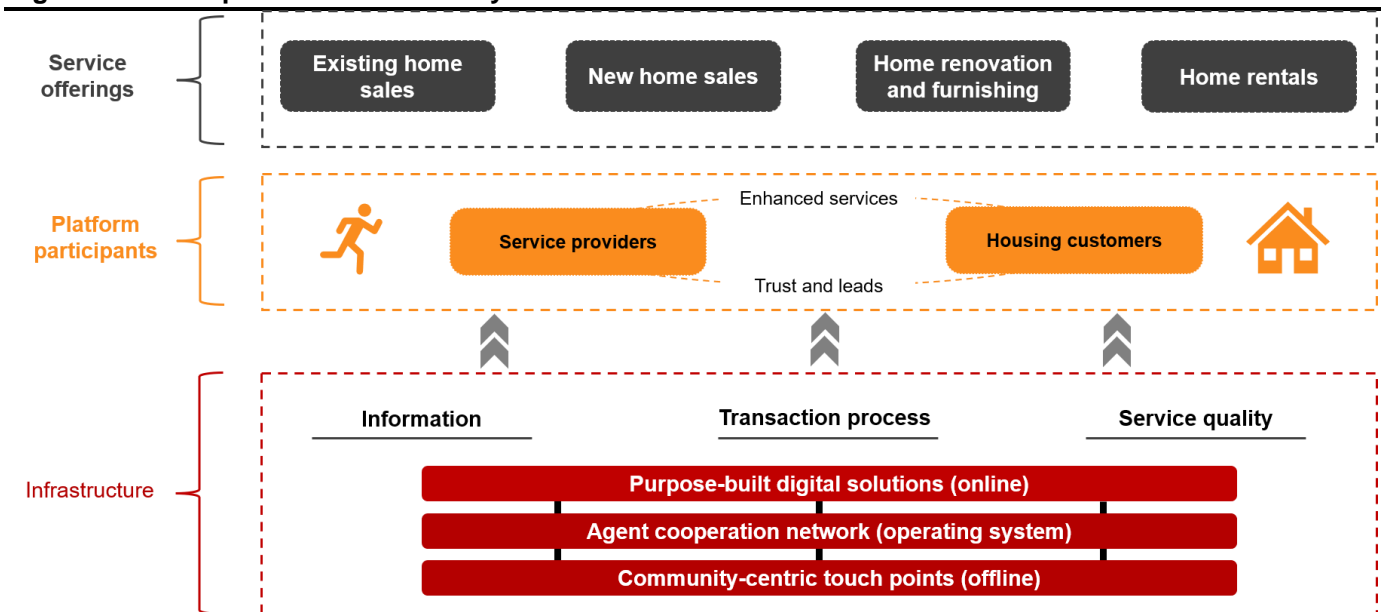
Source: Company data, CMBIGM

Beike's offline network serves as an entry point for customers to its platform as the offline stores are conveniently located within the communities and at the same time become Beike's competitive advantage in the industry. As of 31 Dec 2021, Beike's community-centric network has accumulated over 45,000 active brokerage stores and over 406,000 active agents affiliated with these stores across more than 100 economically vibrant cities in China. Beike's online platform is designed to streamline and digitalize complex and inefficient workflows from home tours to contract signing. Its purpose-built technologies and operational expertise allows Beike to mobilize resources and expand efficiently, while maintaining its commitment to service quality.

■ **Strong infrastructure layout empowers industry digital transformation and efficiency improvement of housing transaction industry**

Leveraging more than 20 years of operating experience through Lianjia, Beike accumulated strong market insights and operational know-how. Housing dictionary lays solid foundation for agent cooperation. Through ACN network, Beike ensures agents are fairly compensated and successfully propelled industry wide collaboration by opening up its infrastructure, which aided an overall improvement in operating efficiency, and in turn enlarges Beike's network effect.

Figure 15: Composition and structure of Beike platform
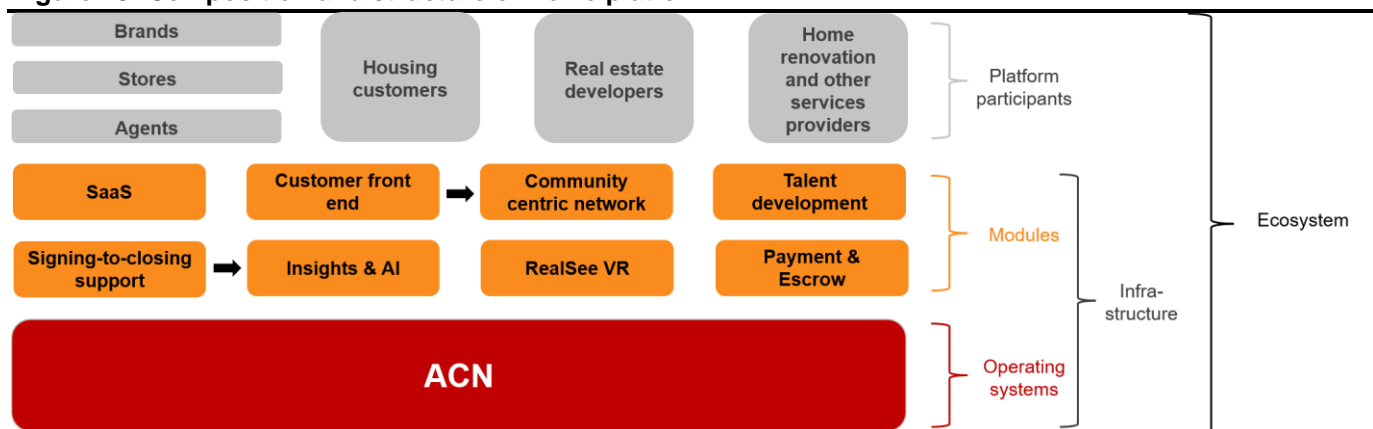
Source: Company data, CMBIGM

1) Lianjia: extensive industry experience provided market insights and operational know-how

Lianjia is China's leading real estate brokerage brand and an integral part of Beike platform. More than 20 years of operating experience through Lianjia since its inception in 2001 provides Beike with strong insights to market, business conditions, and customer needs. The proved track record of Lianjia paves way for Beike to build infrastructure and standards, and drives the rapid and sustainable growth of Beike. Lianjia has accumulated a high-quality agent team, which could guarantee efficient and professional services for housing customers, and helped Lianjia generate good word-of-mouth. Per company data, approximately 46% of Lianjia agents were college graduates or above as of 31 Dec 2021. In particular, approximately 48% of Lianjia agents in Beijing and approximately 68% of Lianjia agents in Shanghai were college graduates or above as of 31 Dec 2021.

2) Housing Dictionary: lays solid foundation for agent cooperation

Housing Dictionary, which was launched in 2008, is the largest and most comprehensive residential housing knowledge base in China today, per CIC. It encompasses a wide range of housing related information from the neighbourhoods, the communities, the buildings, to the floors and rooms. As of 31 Dec 2021, Beike's Housing Dictionary covered approximately 257mn properties. Through Housing Dictionary, Beike verifies the authenticity of property listings, supplement real estate information, and offers property valuation services based on property information and past transaction history. Leveraging Housing Dictionary, Beike is able to quickly verify the authenticity of existing home listings posted, which lays solid foundation for agent cooperation, as effective collaboration among agents require valid and reliable listing information. Per company data, by the end of 31 Dec 2021, Beike had approximately 4.3mn authentic property listings for existing home sales.

3) ACN: effectively propels industry wide collaboration among agents

ACN is the core of Beike's infrastructure. ACN is an operating system that not only fosters reciprocity and bonding among various service providers, but also enables them to enhance service efficiency and customer experience through collaborative efforts and commission allocation. The operating system consists of protocols and practices to specify

roles in cooperative housing transactions and prescribe agents' rights and obligations through commission allocation mechanism. Through ACN, Beike standardizes authentic property listings, promotes cooperation and information sharing among agents, streamlines the whole transaction process, and enables agents to be more specialized in a transaction process and knowledgeable in a particular region.

ACN has transformed the housing transactions and services industry in China, via: 1) fostering sharing of information and resources among services providers; 2) assigning cooperative roles to agents to achieve cross-store and cross-brand collaboration; and 3) creating a professional network for agents, stores, brands, and other service providers to connect with one another.

Figure 16: Demonstration of Beike's ACN operating system
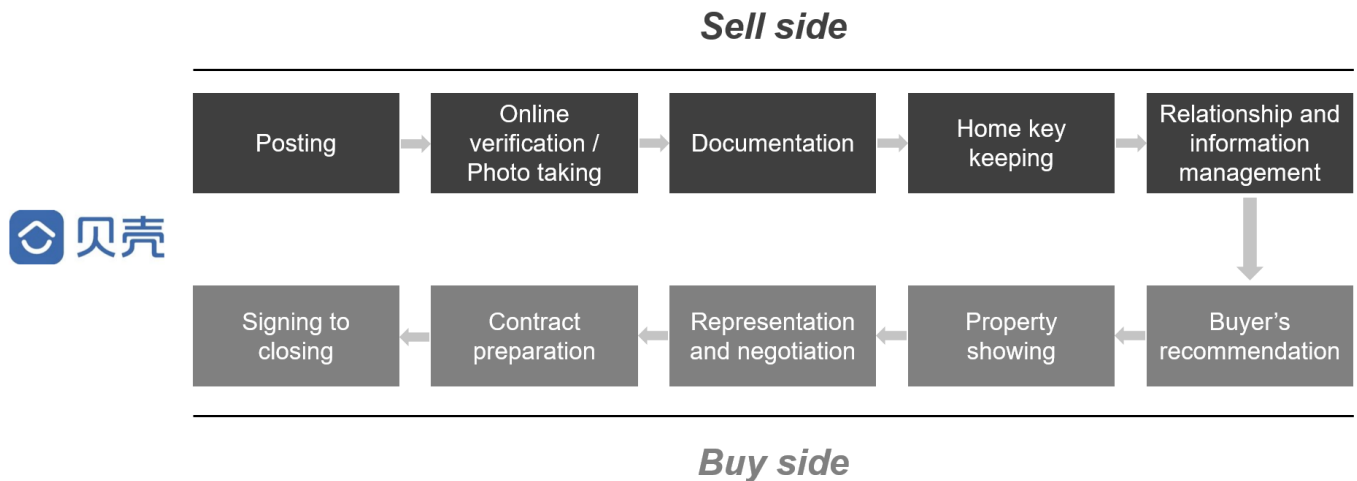
Source: Company data, CMBIGM

Beike's ACN encourages connection and collective work in conducting housing transactions by agents from both buy side and sell side on its platform. Under ACN, commission is allocated automatically based on agents' various roles in a housing transaction, and is not based on negotiations among agents. Through role partition and commission allocation, Beike ensures that agents are fairly compensated for work they do to facilitate a successful transaction, while at the same time fostering a healthy yet competitive working environment. To protect property information and promote healthy competition among sell-side agents, Beike has partitioned geographic areas based on urban development and store distribution, which helps ensure agents become experts on the properties in their vicinity.

By opening up its infrastructure to partners, Beike has helped its partners improve operating efficiency, and attracted an increasing number of real estate brokerage stores and agents to join its platform, which should in turn strengthen Beike's network effect and enhance its revenue generation, in our view. As of 31 Dec 2021, Beike platform connected 299 real estate brokerage brands other than Lianjia, which operated approximately 38,000 active brokerage stores with approximately 299,000 active agents, per company data, as compared to 278 brokerage brands and 39,000 brokerage stores as of 31 Dec 2020. As of 31 Dec 2021, approximately 86% (2020: 81.5%) of the existing home listings on Beike platform were posted by agents affiliated with connected stores, and approximately 64% (2020: 58%) of the GTV of existing and new home transactions on Beike platform was generated by connected real estate brokerage stores and sales channel Beike specifically procured for new home transaction.

ACN has proved its effectiveness in helping connected stores improve efficiency. According to Beike Research institute, nationwide GTV of existing home sales was up 7% YoY in 3Q22, while existing home transaction on Beike platform was up 19% YoY, which we attribute to Beike's strong network effect, and the release of pent-up demand in Beijing and Shanghai. Per Beike, average store commission income of Deyou franchise store and connected stores on Beike platform grew by 25% YoY, and average commission income

per agent rose by 25% YoY, both indicating an improvement in operating efficiency backed by strong network effect.

4) Effective platform governance mechanism guarantees high standard of professionalism in service delivery

In order to encourage agents to comply with ACN, Beike has implemented three corporate governance mechanisms, including: 1) Beike Score; 2) Beike Coins; 3) Credit points, which could help guarantee high standards of professionalism in service delivery, in our view.

Beike Score is established by Beike to indicate agents' performance and service quality. It was derived by a comprehensive multifactor evaluation system, with attributes of agents such as professional qualifications, customer complaints, customer conversion rates and records of collaborative teamwork with other agents among these factors. Agents with higher Beike Score can enjoy certain privileges, such as higher exposure to property listings, customized agent profile featured on customer front end, access to offline training camps and coupons for Beike's online courses. In 2021, Beike score reached 2.7 billion views, demonstrating its broad acceptance across the industry.

Figure 17: Illustration of Beike score

Source: Company data, CMBIGM

Beike Coins is a type of virtual currency on Beike platform. It can be earned in many ways including through various promotional events to encourage compliance with ACN. The coin can be used to purchase utilities relating to their brokerage job and agent display spots of their responsible property listings on their customer front end to increase exposure and enhance transaction probabilities.

Credit points is established by Beike to encourage honest cooperation and fair competition on platform. Agents begin to maintain their own credit points once joining Beike platform, and their points will be deducted for ACN rule violations. Agents may be alerted, restricted or barred from accessing Beike platform for a specific period, depending on the accumulated credit point deduction.

■ **Beike: strong industry know-how and technology infrastructure hone competitive edge**

There are different market participants with different business models in China's housing related industry, including brokerage services providers and service providers in other housing related industry, which consists of online players, offline players, and integrated online and offline platforms. Top five players in the market together accounted for c. 14.6%

of total GTV in 2021, per CIC, and Beike took the lead with 9.7% of total market share, in our view indicating strong market leadership.

Figure 18: Top 5 market player in housing related industry in China

Market players	Listing status	Housing related GTV (2021; RMBbn)	Market share (%)	Housing related revenue (RMBbn)	No. of brokerage stores ('000)	No. of agents ('000)
Beike	Listed	3853.5	9.7	80.8	>45	>406
Company A	Not listed	558.0	1.4	6.6	<2	<40
Company B	Listed	504.6	1.3	5.9	<1	<20
Company C	Listed	430.0	1.1	10.9	4.6	50
Company D	Listed	415.8	1.1	7.9	10	30

Source: CIC, CMBIGM

In our view, Beike's competitive edge lies in its strong industry know-how, superior customer service capability, online and offline integration capability, and strong network effect based on technology and ACN network, which are hard to replicate for its competitors.

"One Body, Two Wings" strategy to develop long-term growth opportunities

Beike unveiled its "One Body, Two Wings" strategy by end-2021, with one body referring to housing transaction services, and two wings referring to home renovation & furnishing services, and home rental services. Home renovation and furnishing business could generate operating synergy with core housing transaction services, in our view, and the healthy development of "Two Wings" business could help Beike expand total addressable market (TAM), and generate more revenue and earnings growth opportunities over the long-run, in our view.

Regarding home renovation and furnishing business, Beike introduced its own home renovation brand Beiwoo and acquired Shengdu to accelerate business development. The company aims to leverage its proven "vertical to horizontal" playbook to standardize and digitalize home renovation industry.

■ Shengdu acquisition to accelerate expansion of home renovation business

Beike announced on 6 July 2021 that it has entered into a definitive agreement with Shengdu Home Renovation (Shengdu) and all of its existing shareholders and subsidiaries, pursuant to which Beike has agreed to acquire a 100% equity interest in Shengdu for a total consideration capped at RMB8bn, consisting of cash and equity. The transaction was officially completed in late-April 2022, and Beike started to consolidate Shengdu's financial results since May 2022.

Shengdu is a full service home renovation service provider in China and provides customers with one-stop home renovation services. It was founded in 2002 and is headquartered in Hangzhou. Shengdu's competitive edge over peers lies in: 1) strong internal control capability; 2) supply chain capability; 3) product capability; and 4) company culture, in our view.

Figure 19: Illustration of responsibilities and level of engagement for decoration services providers
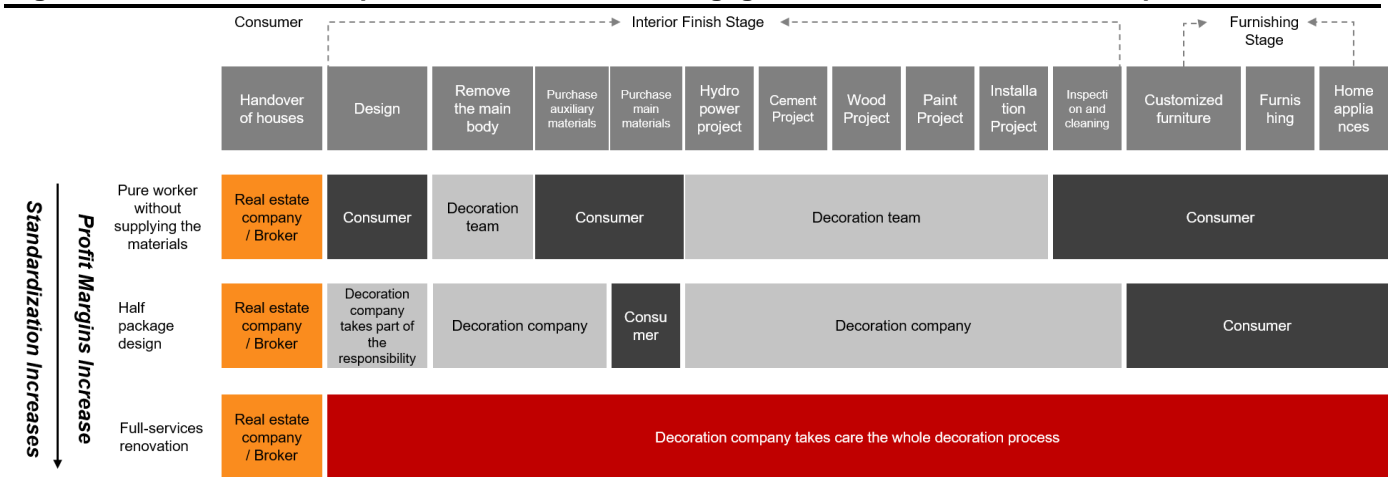
Source: Company data, CMBIGM

Driven by a growing share of existing homes in overall housing supply and Chinese families' pursuit of better living conditions, home renovation and furnishing industry is expanding rapidly. According to CIC, market size of home renovation and furnishing in China reached RMB6.9tn in 2021, representing a 2016-2021 CAGR of 8.9%, and is expected to grow further to RMB10.4tn in 2026 with a 2021-2026 CAGR of 8.6%.

Figure 20: China: home renovation and furnishing market size in terms of GTV
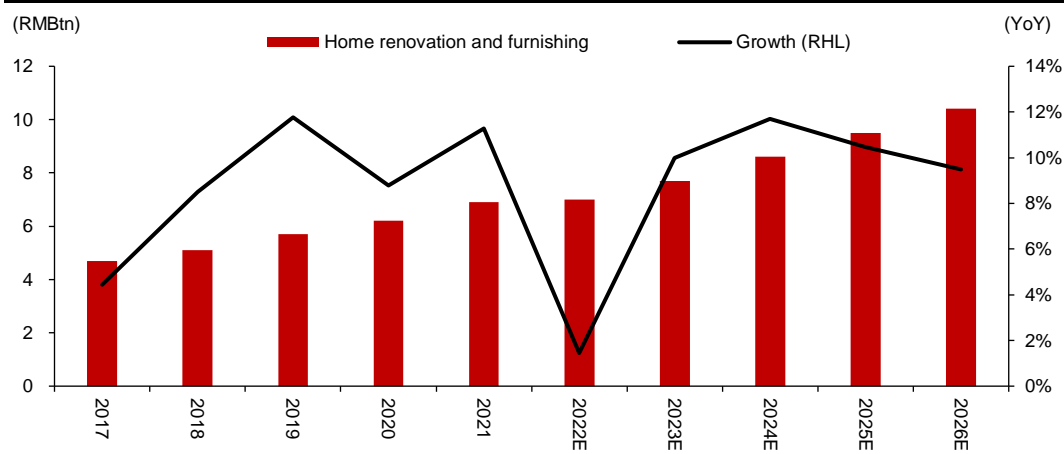
Source: CIC, CMBIGM

However, as home renovation and furnishing industry lacks standardization, and channel efficiency for selling home decoration products is low, the market is fragmented. Per CIC, China's home renovation and furnishing industry has over 100,000 market players as of 31 Dec 2021, and the top 5 players accumulatively accounted for less than 5% of the market share in 2021.

Figure 21: China - Top five home renovation and furnishing companies (2021)

| (RMBbn)	Home renovation and furnishing GTV (2021)	Market share (%)
Company E	137.1	2.0%
Company F	104.0	1.5%
Company G	47.2	0.7%
Company H	20.1	0.3%
Company I	20.0	0.3%

Note: in terms of GTV
Source: CIC, CMBIGM

By acquiring Shengdu, Beike could unleash operating synergy between its core housing transaction business and home decoration business, and generate more industry know-how to standardize industry practices and protocols, in our view, although the process of industry standardization likely takes time.

Beike's home renovation and furnishing business segment generated revenue of RMB1.8bn in 3Q22, up more than 40% YoY, and contracted sales reached close to RMB2.0bn, up more than 60% YoY, among which the number of home renovation contract volume increased by more than 50% YoY and average order value up by more than 10% YoY. According to company data, referral customers from core business contributed to over 43% of home renovation and furnishings contracted sales in 3Q22, up from 25% in 2Q22.

At the initial stage, Beike may need to invest and help Shengdu expand its footprints nationwide. After deepening the standardization in home renovation products, services, and professionals, Beike could operate the home renovation business in a platform mode and achieve higher operating efficiency. Notably, Beijing Beiwo Shengdu has reached quarterly breakeven and monthly contracted sales of over RMB100mn in June, July and August, which management attributed to the increasing business scale and continuously enhanced supply chain capability. We forecast the nationwide expansion of Shengdu to bring around RMB800mn loss to Beike in 2022E, while we currently forecast the business to achieve breakeven in 2024.

Figure 22: Beike: illustration of development strategy for Beike's home decoration business
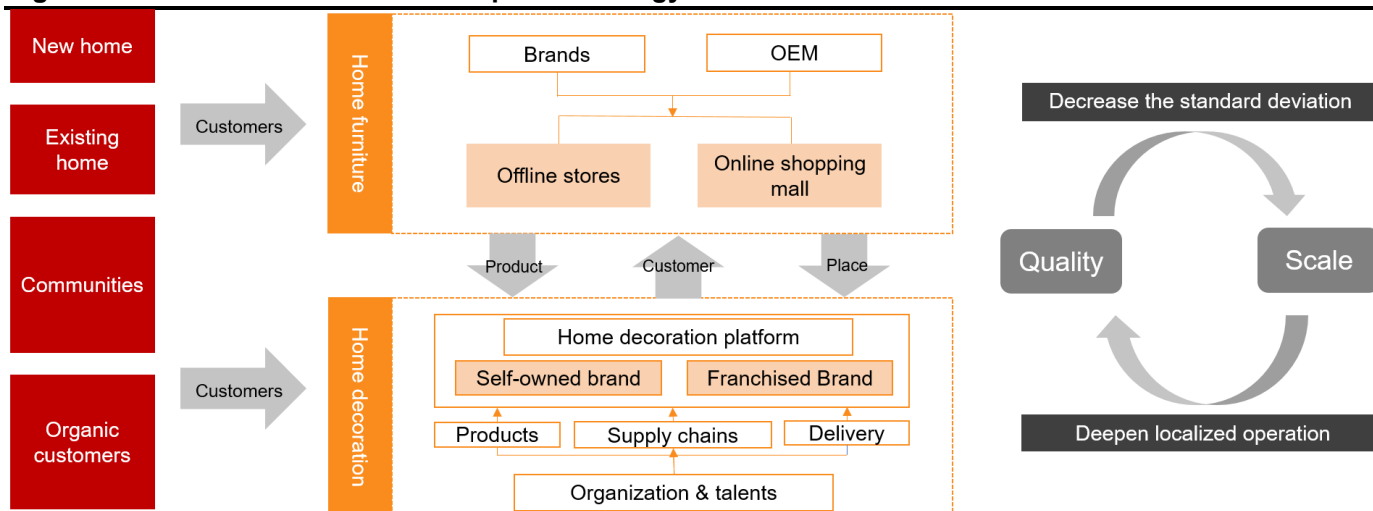
Source: Company data, CMBIGM

Financial forecast: recovery in housing transaction industry and stringent cost control to aid earnings growth

We forecast Beike to achieve 2022-2024E GTV/revenue/contribution profit/non-GAAP net profit CAGR of 12.6/14.2/20.2/89.4%. Continuous market share gain in existing home transaction for Beike, as well as robust adjusted net profit growth aided by operating efficiency improvement amid industry headwind is the key to watch, in our view. New/existing home GTV transacted on Beike's platform represented 9.8/29.4% of the total in 2021, up from 2.2/12.6% in 2018. We expect Beike's market share in existing home transaction business to further expand to 31.0% in 2024E, aided by Beike's scale effect and superior services capability.

Figure 23: Beike: summary of key forecast

(RMBtn)	2021	2022E	2023E	2024E
GTV	**3.9**	**2.6**	**3.0**	**3.3**
Growth (YoY%)	10.1%	-33.1%	15.0%	10.3%
Existing home transaction	2.1	1.6	1.9	2.1
Growth (YoY%)	6.1%	-24.2%	20.3%	12.8%
New home transaction	1.6	0.9	0.9	0.9
Growth (YoY%)	16.3%	-43.0%	1.1%	2.2%
Emerging and other services - old disclosure	0.2	0.1	0.2	0.2
Growth (YoY%)	5.9%	-45.5%	58.7%	27.2%
1) Home renovation and furnishing		0.01	0.01	0.01
Growth (YoY%)			59.9%	15.1%
2) Emerging and other services - new disclosure		0.1	0.2	0.2
Growth (YoY%)			58.6%	28.0%
(%)	**2021**	**2022E**	**2023E**	**2024E**
Blended monetization rate				
Existing home transaction (revenue/GTV)	1.6%	1.5%	1.6%	1.6%
New home transaction (revenue/GTV)	2.9%	3.0%	3.0%	3.0%
(RMBbn)	**2021**	**2022E**	**2023E**	**2024E**
Revenue	80.8	58.7	69.5	76.6
Growth (YoY%)	15%	-27%	18%	10%
Existing home transaction	31.9	24.2	30.3	34.6
Growth (YoY%)	5%	-24%	26%	14%
New home transaction	46.5	27.5	27.8	28.4
Growth (YoY%)	22%	-41%	1%	2%
Emerging and other services - old disclosure	2.3	7.1	11.4	13.6
Growth (YoY%)	18%	204%	61%	19%
Gross profit	15.8	12.9	17.2	19.9
Operating profit	(1.4)	(1.6)	2.4	4.2
Contribution profit	22.6	18.3	23.3	26.4
Non-GAAP net profit	2.3	2.0	5.6	7.0
(%)	**2021**	**2022E**	**2023E**	**2024E**
Gross margin	19.6	21.9	24.8	25.9
S&M expense ratio	5.3	7.3	7.0	6.8
R&D expense ratio	4.0	7.0	6.2	5.9
G&A expense ratio	11.1	10.2	8.2	7.7
Operating profit margin	(1.7)	(2.7)	3.5	5.5
Contribution profit margin	28.0	31.1	33.5	34.4
Non-GAAP net profit margin	2.8	3.3	8.1	9.2

Source: Company data, CMBIGM estimates
Note: Beike started to break down emerging and other services segment to home renovation and furnishing and new emerging and other services from 2Q22 onwards. Unless otherwise stated, emerging and other services are referring to old disclosures, which includes both home renovation and furnishing business and emerging and other services in new disclosures.

Strong services capability and network effect aids market share gain in housing transaction market

Beike used to generate GTV from three business pillars: 1) new home transaction; 2) existing home transaction; 3) emerging and other services. Starting from 2Q22, Beike strips out home renovation and furnishing business from previous emerging and other services segment, and independently listed two business segment. We are using "old" and "new" to distinguish the two emerging and other services segments, and please be noted that unless otherwise stated, emerging and other services in this report are referring to old disclosures, which includes both home renovation and furnishing business and emerging and other services in new disclosures.

The Beike platform generated total GTV of RMB3.9tn in 2021, representing a 2018-2021 CAGR of 49.5%, among which existing home transaction services/new home transaction services/ emerging and other services saw GTV CAGRs of 35.8/78.9/54.7%, respectively.

For 2021-2024E, we forecast a GTV CAGR of -5.3%, with GTV reaching RMB3.3tn in 2024E, mainly dragged by new home transaction services, as we expect the recovery in both consumer sentiment in buying a new house and real estate developer's balance sheet takes time. However, we forecast 2021-2024E GTV CAGR of 3.2% for emerging and other services, driven by demand for quality living and the upgrading of consumption structures, which is likely to result in growing demand for home renovation and furnishing. Also, we estimate existing home transaction services GTV to remain largely stable, the recovery could be driven by increasing housing supply of existing homes and rising housing turnover rate.

Figure 24: Beike: total GTV and growth
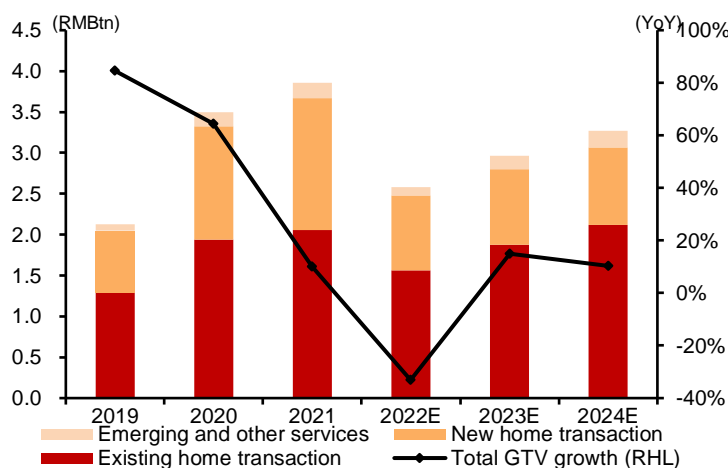
Source: Company data, CMBIGM estimates

Figure 25: Beike: GTV breakdown by transaction type
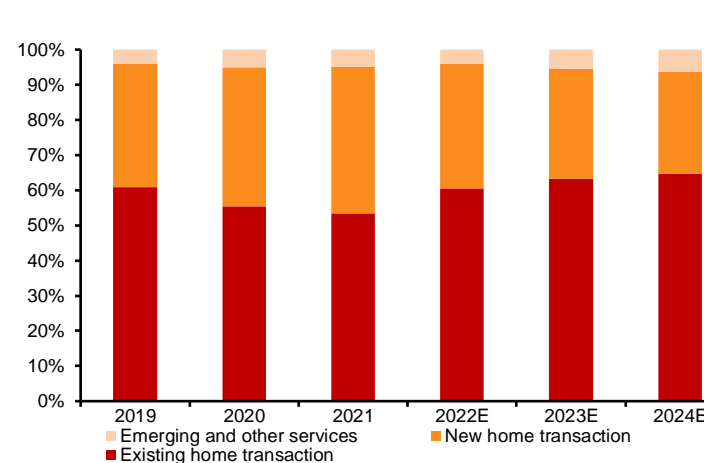
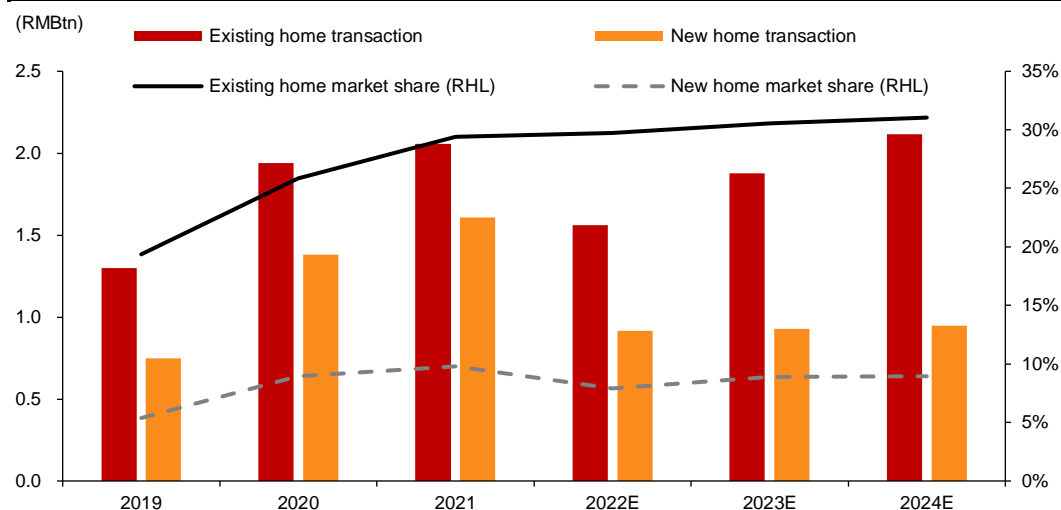
Source: Company data, CMBIGM estimates

In terms of GTV contribution, existing home transaction services/new home transaction services/emerging and other services accounted for 53.4/41.7/4.8% of the total in 2021, compared to 61.0/35.1/3.9% in 2019. We estimate the GTV contribution from emerging and other services to increase to 6.3% of the total in 2024E, and that from existing home transaction/new home transaction to account for 64.7/29.0%.

Beike's extensive cooperation network, abundant capital reserves, data technology, and deep industry know-how have aided its market share gain over 2018-2021. Based on Beike's company data and CIC data, new/existing home GTV transacted on Beike's platform represented 9.8/29.4% of the total in 2021, up from 2.2/12.6% in 2018. We expect Beike's existing home business to maintain market share gain over 2022-2024E, with total market share to reach 31.0% in 2024E, aided by Beike's scale effect and superior services capability.

For new home transaction, we expect short-term volatility in market share, as Beike adopted a more cautious operating strategy that prioritizing revenue generation and cash payback over scale expansion amid current macro conditions. However, Beike demonstrated its enhanced bargaining power in industry value chain in new home

transaction, in our view, evidenced by an increase in proportion of new home transaction GTV generated from "Commission in advance" (Kuaiyong) model, in which Beike receives commission from real estate developer in advance, which minimizes the operational risk for its new home business. We forecast Beike's market share in new home transaction to decline to 7.9% in 2022E, while rebound to 8.9/8.9% in 2023/2024E, driven by Beike's strong services capability in helping real estate developer clear inventory.

Figure 26: Existing home/new home GTV transacted on Beike

Source: Company data, CMBIGM estimates

Superior service quality and enhancing bargaining power supports a higher than industry average commission rate

Beike has three reporting business segments in 2021: existing home transaction services, new home transaction services, and emerging and other services (or home renovation & furnishing and emerging and other services starting from 2Q22). Total revenue was RMB80.8bn in 2021, representing a 2018-2021 CAGR of 41.3%, with CAGRs of 16.6/83.9/31.7% for existing home transaction services/new home transaction services/emerging and other services. We estimate 2021-2024E revenue CAGRs of 2.7/-15.1/79.8% for existing home transaction services/new home transaction services/emerging and other services, with total revenue seeing a CAGR of -1.7% over the same period and reaching RMB76.6bn in 2024E.

Figure 27: Beike: total revenue and growth
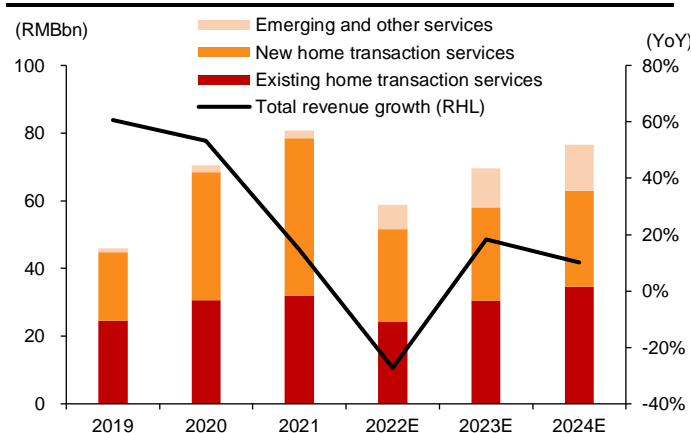
Source: Company data, CMBIGM estimates

**Figure 28: Beike: rev breakdown by transaction type**
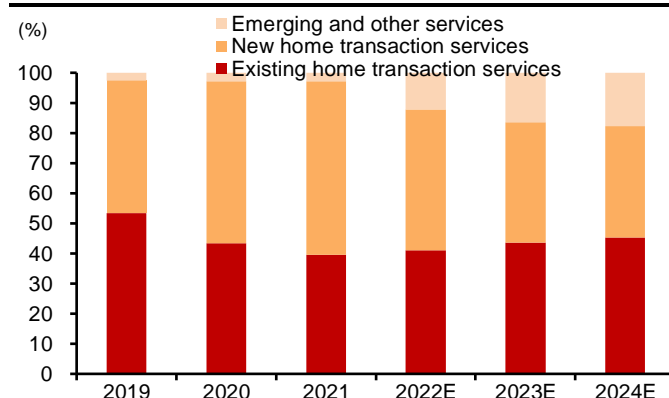
Source: Company data, CMBIGM estimates

Revenue generated from existing home transaction services/new home transaction services accounted for 39.6/57.5% of total revenue in 2021, compared to 70.4/26.1% in 2018. We forecast the revenue contribution from new home transactions to decline to

37.1% of the total in 2024, and that for existing home transactions to increase to 45.2% in 2024. For emerging and other services, we forecast its revenue contribution to grow from 2.9% in 2021 to 17.7% in 2024, driven by the consolidation of financial results of Shengdu.
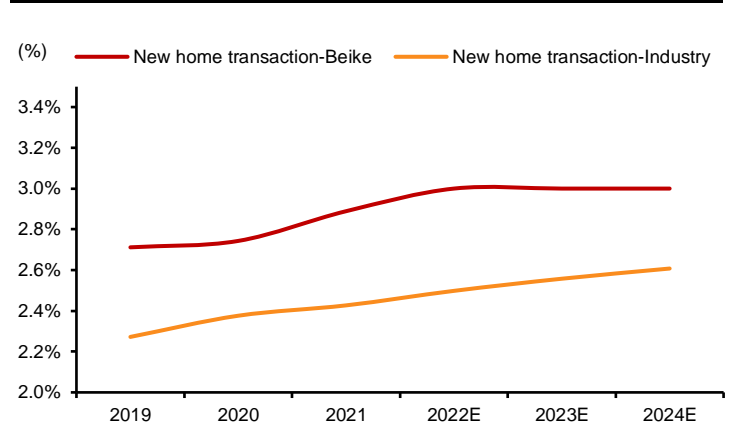
Figure 29: Commission rate: existing home
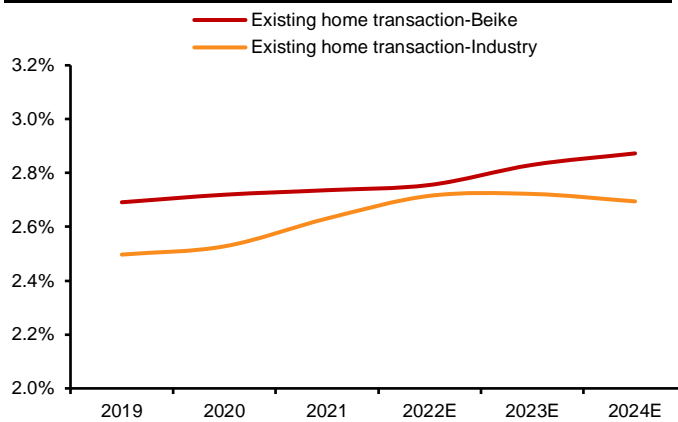
Source: Company data, CIC, CMBIGM estimates
Note: blended commission rate for existing home sales and home rentals

Figure 30: Commission rate: new home

Source: Company data, CIC, CMBIGM estimates

Based on our calculations, Beike had a higher commission rate than the industry average for both existing home transaction and new home transaction over 2018-2021, which we attribute to higher service quality provided and extensive services network based on ACN. As people are increasingly willing to pay for quality services, Beike's higher than industry average take rate in existing home transaction could sustain, in our view. We estimate blended commission rate for Beike's existing home transaction and rental services to expand to 2.9% in 2024 from 2.5/2.7% in 2018/2021, among which we estimate Lianjia commission rate to increase to 2.6% in 2024E (2021E: 2.5%).

For new home business, Beike has proven its ability in helping real estate developer achieve more effective marketing solutions and increase sell rate, which leads to a stronger bargaining power. We forecast Beike's new home transaction commission rate to increase to 3.0% in 2022E from 2.9% in 2021, driven by increase in bargaining power, and to remain largely stable over 2023-2024E, driven by the mixed impact of: 1) increase in GTV mix from state owned real estate developers, which tends to have lower commission rate; and 2) increase in Beike's bargaining power, and increase in GTV generated from Kuaiyong program, which tends to have higher commission rate.

Contribution margin has upside potential

Contribution profit, which Beike defines as revenue less direct compensation to internal agents and sales professionals, and split commission to connected agents and other sales channels for such services, reached RMB22.6bn in 2021, translating into 28.0% contribution margin, down from 31.7% in 2020, mainly owing to: 1) relative higher compensation costs for Lianjia agents and the compensation costs for transaction support staff; 2) expansion of dedicated sales teams with the expertise on new home transaction services on Beike platform in 2021. We forecast overall contribution profit to achieve a 2021-2024 CAGR of 5.2% and expect contribution margin to increase to 34.4% in 2024.

Figure 31: Beike: contribution profit and growth
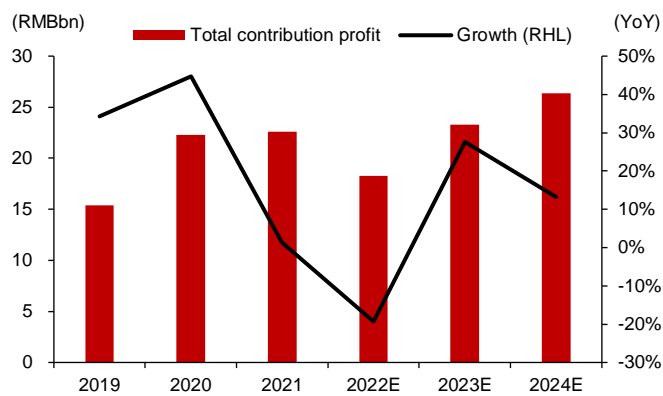
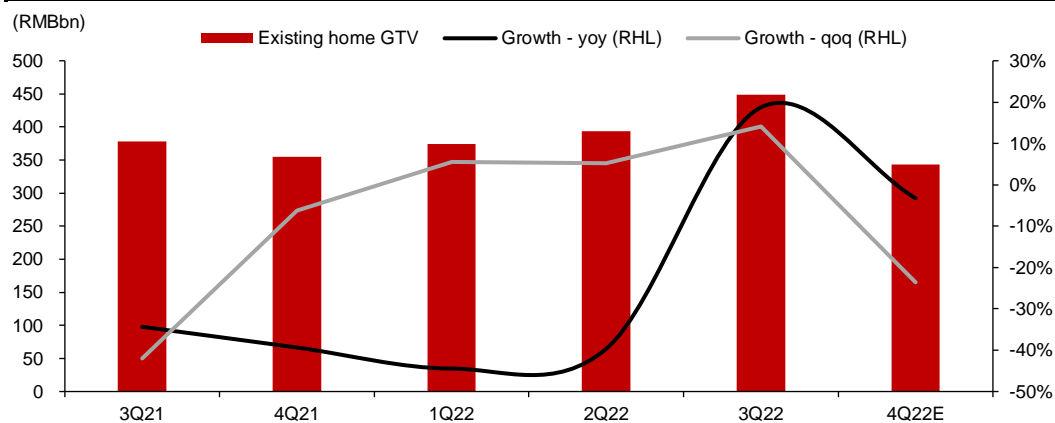Source: Company data, CMBIGM estimates

Figure 32: Contribution profit margin
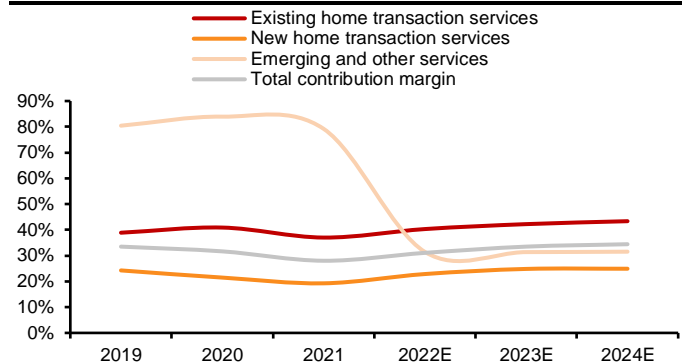
Source: Company data, CMBIGM estimates

Existing home: ACN established competitive moat

For existing home transaction services, we identify key revenue growth drivers are: 1) GTV growth for Lianjia and connected stores; 2) commission fee rate charged by Lianjia, and Beike connected stores; and 3) platform services fee rate charged by Beike on brokerage brands. In the near term, Beike's existing home GTV generation could still be impacted by pandemic resurgence, in our view. Although there was a relaxation for pandemic prevention policy, but offline activities are still impacted as people tends to stay at home to avoid being infected. We estimate Beike to record 23.6% QoQ drop on existing home transaction GTV in 4Q22, and this will translate into 3.3% YoY decline.

Over the long-term, we see store efficiency improvement for both Lianjia and connected stores as well as store network expansion to provide support for GTV growth, continuously enhanced services quality to support upside on commission rate, and improved operating efficiency to support upside on contribution margin. Beike's ACN has proved its effectiveness in helping improve operating efficiency for both agents and brokerage stores, in our view. Leveraging ACN and superior service quality, Beike could continue enlarging its market share in China's existing home transaction market.

Figure 33: Beike: quarterly existing home GTV and growth

Source: Company data, CMBIGM estimates

Existing home transaction GTV reached RMB2.1tn in 2021, representing a 2018-2021 CAGR of 35.8%, with GTV transacted through the Lianjia brand seeing a CAGR of 9.7%. Over the long-run, we see GTV growth drivers for existing home transactions coming from: 1) store efficiency improvement for both Lianjia and connected stores, aided by strong infrastructure support and the implementation of an agent specialization strategy; and 2) store network expansion for connected stores.

We estimate 2021-2024 GTV CAGRs of -0.2% and 2.1% for Lianjia existing home GTV and connected agents GTV, which we believe will underpin an overall GTV CAGR of 0.9% for existing home GTV. GTV contribution from connected agents and brands could rise to 51.4% of the total in 2024, compared to 49.7% in 2021, based on our forecast, as Beike's infrastructure support gains more traction among brokers.

Figure 34: Beike: existing home GTV and growth
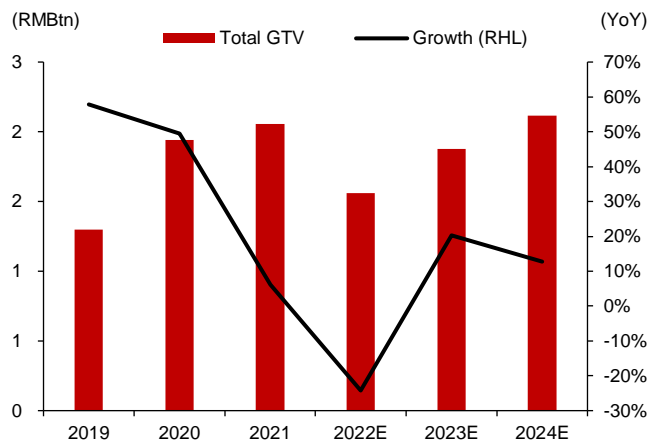
Source: Company data, CMBIGM estimates

Figure 35: Breakdown of existing home transaction GTV
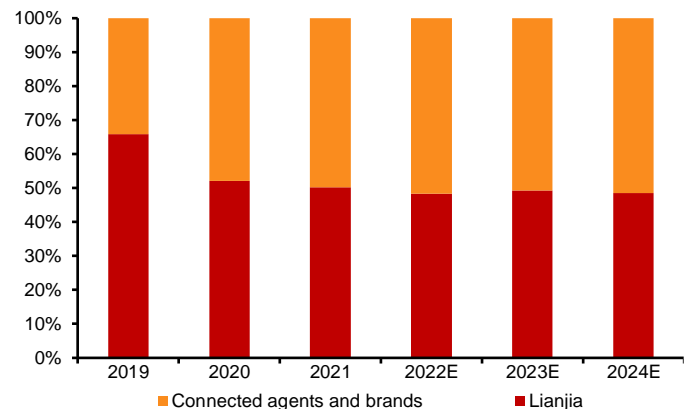
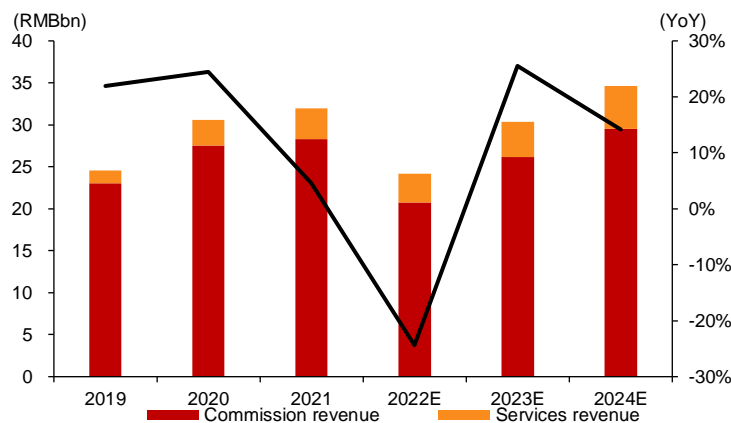Source: Company data, CMBIGM estimates

■ **Revenue growth forecast: 2.7% CAGR over 2021-2024E**

Beike generates revenue from existing home transaction services primarily by earning commissions from housing customers for transactions of sales or leases facilitated by its Lianjia brand where it acts as the principal agent or splits commissions with other brokerage firms acting as the principal agents in cooperation with Beike to complete transactions.

For transactions where Beike served as principal agent, Beike accounts for the commissions from these agency service contracts on a gross basis, with any commissions paid to other brokerage firms recorded as a cost of revenues; for transactions where Beike served as a participating agent, Beike accounts for the commission from these agency service contracts on a net basis.

In addition to commission revenue, the existing home transaction services business segment also includes the revenue generated from: 1) platform services fees from real estate brokerage firms on the Beike platform as a percentage of the transaction commissions earned on the platform for using ACN and the SaaS system; 2) franchise fees from brokerage firms as a percentage of the transaction commissions earned under Beike's franchise brands such as Deyou; and 3) other services fees for various services offered by the Beike platform, such as transaction closing service through Beike's transaction centre.

Revenue generated from existing home transaction services reached RMB31.9bn in 2021, representing a 2018-2021 CAGR of 16.6%, of which commission revenue achieved a CAGR of 12.4% and services revenue achieved a CAGR of 165.9%. We attribute the strong growth in services revenue to Beike's strategic move to open its infrastructure to other brokerage stores, which helps in turn to enlarge Beike's network effect.

Figure 36: Beike: existing home transaction services revenue

Source: Company data, CMBIGM estimates

Figure 37: Existing home transaction services revenue breakdown
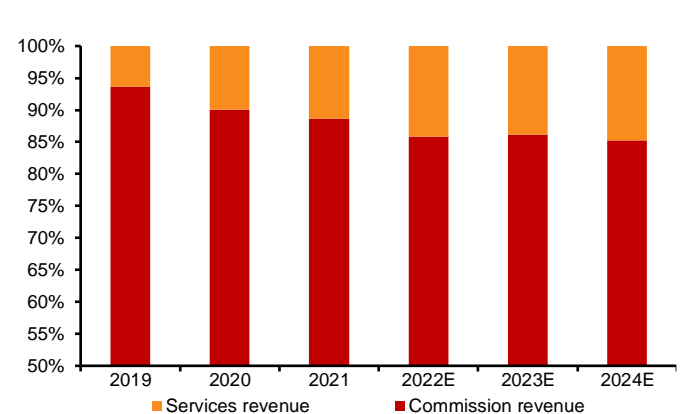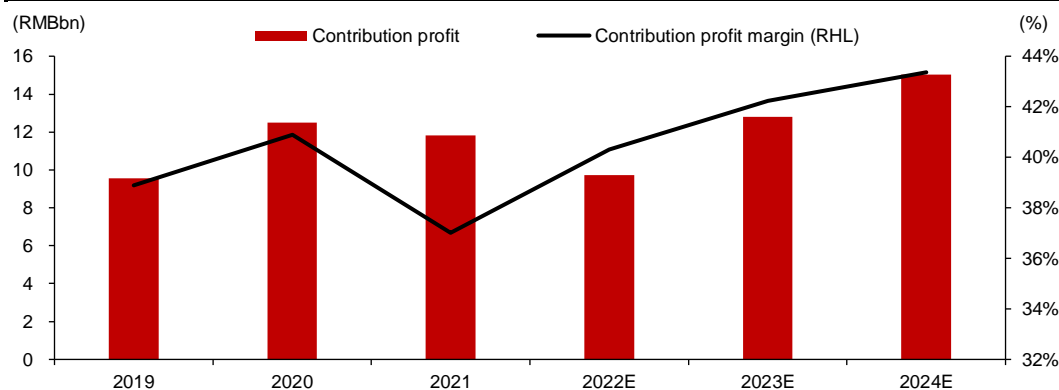

Source: Company data, CMBIGM estimates

We estimate existing home transaction services revenue will see a CAGR of 2.7% over 2021-2024, and reach RMB34.6bn in 2024, within which we estimate commission/services revenue will achieve CAGRs of 1.4/12.1%, and reach RMB29.5/5.1bn.

For commission revenue, we expect store efficiency improvement to continue drive Lianjia's GTV growth, aided by enhanced technology capability and implementation of the agent specialization strategy. For commission rate, Beike reported that Lianjia's commission rate for homes sales and rental was 2.49/2.56% in 2018/2019. We expect a slight uptick in Lianjia's commission rate for existing home transactions to 2.51/2.59/2.62% in 2022/2023/2024E, driven by enhanced services quality.

■ **We forecast contribution profit margin to increase to 43.4% in 2024E**

The contribution profit margin of existing home transaction service business declined to 37.0% in 2021 (2020: 40.9%), primarily attributable to a relatively higher percentage of fixed compensation costs for Lianjia agents and the compensation costs for transaction support staff. Beike has been adopting stringent cost saving measures, which we believe could aid a recovery in contribution profit margin. For example, management noted that it has reformed and shut down the loss making stores and drove rent reduction for stores and office space.

We estimate the contribution margin of existing home transaction services business to improve to 40.3% in 2022 (2021: 37.0%), driven by the costing saving initiative, and to expand further to 42.2/43.4% in 2023/2024E, driven by the recovery in revenue generation, which could help unleash operating leverage.

Figure 38: Existing home transaction services: contribution profit and margin

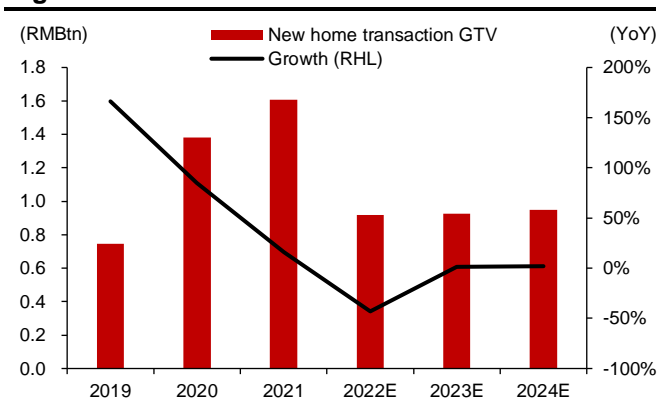Source: Company data, CMBIGM estimates

New home: higher bargaining power in improving competitive landscape

Beike, in our view, is becoming an increasingly important channel for real estate developers for new home sales, as it has broad user reach supported by both strong offline presence and ample online traffic. Although overall new home transaction GTV was impacted by tightened credit policy and softened macro environment, overall competitive landscape has been improving for Beike, as some of the industry players fell out. Also, previous fierce competition on commission rate also mitigated.

For new home business, Beike has been adopting a more cautious operating strategy that prioritizing revenue generation and cash payback over scale expansion amid current macro conditions. However, Beike demonstrated its enhanced bargaining power in industry value chain in new home transaction, in our view, evidenced by an increase in proportion of new home transaction GTV generated from "Kuaiyong" program, in which Beike receive commission from real estate developer in advance, which minimize the operational risk for its new home business. Beike's market share gain in new home business could resume, in our view, with the improvement in macro.

GTV for new home transactions reached RMB1.6tn in 2021, representing a 2018-2021 CAGR of 78.9%, among which GTV transacted via Lianjia brand achieved a CAGR of 24.5%, and GTV transacted via connected agents and other sales channels achieved a CAGR of 112.7%. However, in 9M22, as more developers are facing liquidity risks amid rising bond maturity, and the softened macro impacted consumers willingness in buying new houses, Beike's new home transaction GTV declined 45.9% YoY. We estimate new home transaction GTV to decline 32.9% YoY in 4Q22. On annual basis, we forecast Beike's new home transaction GTV to achieve a 2021-2024E CAGR of -16.2%, with total GTV to reach RMB0.9tn in 2024E.

**Figure 39: Beike: new home transaction GTV**

Source: Company data, CMBIGM estimates

Figure 40: New home transaction GTV breakdown
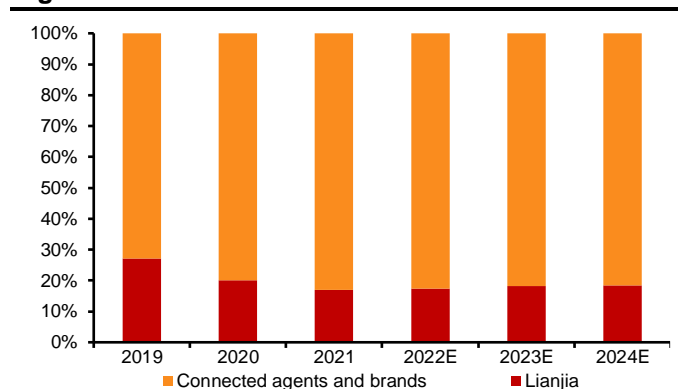
Source: Company data, CMBIGM estimates

Blended new home commission rates on Beike, measured by new home transaction services over new home GTV, reached 2.89% in 2021, up from 2.74% in 2020, and we attribute the improvement to increasing demand from real estate developers. The commission rate further rose to 2.99/2.98% in 2Q/3Q22, driven by the implementation of Kuaiyong program, aided by Beike's strengthened bargaining power. We forecast commission rate to maintain largely stable at 3.0% over 2022-2024E, driven by mixed impact of: 1) increase in GTV mix from state owned real estate developers, which tends to have lower commission rate; and 2) increase in Beike's bargaining power, and increase in GTV generated from Kuaiyong program, which tends to have higher commission rate. Our projections lead to a 2021E-2024E revenue CAGR of -15.1% for new home transaction services, with total revenue to reach RMB28.4bn in 2024E.

Figure 41: New home transaction services: contribution profit and contribution margin
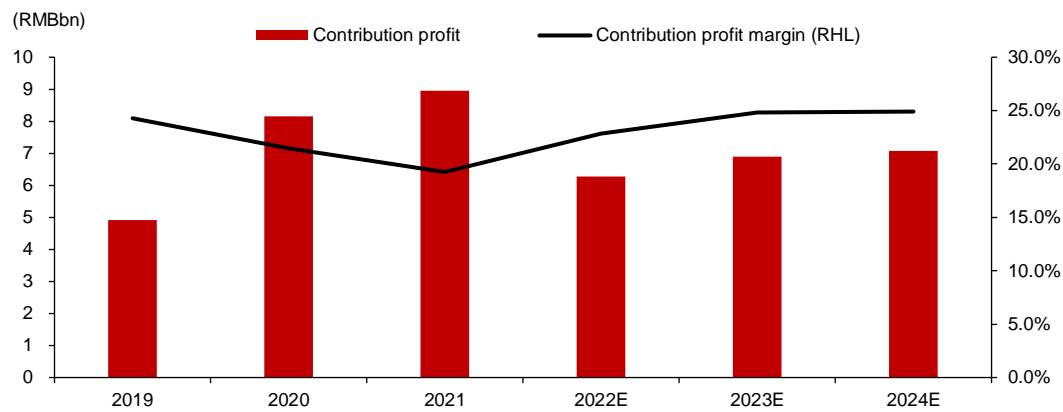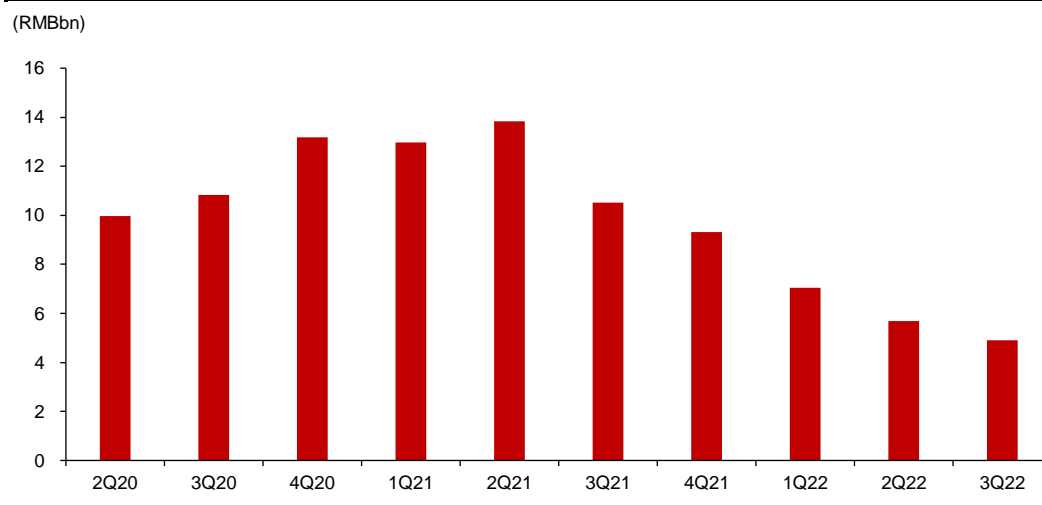

Source: Company data, CMBIGM estimates

The contribution profit for new home transaction services was RMB8.9bn in 2021, representing a 2018-2021 CAGR of 43.5%, and translating into a contribution profit margin of 19.3%, down 2.2pp YoY, owning to: 1) increasing percentage of new home transactions has been facilitated by connected agents and other sales channels; 2) expansion of dedicated sales teams with the expertise on new home transaction services. However, Beike has seen an improvement in contribution margin for new home transaction services to a historical high at 24.9% in 3Q22, aided by: 1) decrease in channel cost as percentage of revenue driven by improvement in bargaining power; 2) stringent cost control and operating efficiency improvement.

We forecast overall contribution margin for new home transaction to improve to 22.9/24.8/24.9% in 2022/2023/2024E, driven by decrease in channel cost as a percentage of commission revenue as Beike has strong bargaining power.

■ **Incremental risks on collecting accounts receivables likely manageable**

Majority of Beike's accounts receivable is generated from new home business (96% by end-2021). Beike has been prioritizing revenue generation and cash payback over scale expansion amid current macro conditions since 3Q21, and has been making sufficient reserve against bad bet, which led to a decrease in accounts receivable, and we think incremental risks on collecting accounts receivables likely manageable for Beike.

Figure 42: Beike: accounts receivables, net
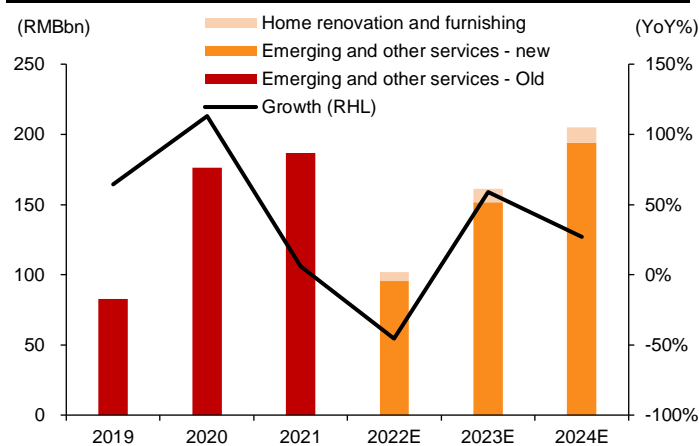

Source: Company data, CMBIGM

Per management on 2Q22 earnings conference call, Beike's cumulative balance of bad debt provision was RMB2.21bn, covering 31% of the original value of corresponding total receivables. For the 41 high risk real estate developers, Beike has made 83% of their historical unsecured receivables balance, cumulatively amounted to RMB1.32bn. For remaining developers with relative low risk, Beike also made a bad debt provision at 10%-20%. In 2Q22, Beike has collected RMB8.45bn of new home sales receivables, 1.27x of the new home sales revenue. In 3Q22, Beike reversed RMB195mn bad debt provision, which to some extent indicate limited incremental financial impact from bad debt, in our view, as Beike has taken a cautious approach when measuring debt, and has accounted for sufficient bad debt provision.

Emerging and other services: new revenue growth driver for the long-term

Emerging and other services primarily consists of two business pillars: financial services, and home renovation & furnishing business. Beike started to breakdown home renovation and furnishing business from emerging and other services business in 2Q22. Both financial services, and home renovation and furnishing business have synergy with existing home and new home transaction business, in our view, and the cross-offering of standardized high quality services could aid Beike's long-term revenue and earnings growth, in our view.

Segmental revenue was RMB2.3bn in 2021, up 17.9% YoY. The YoY increase in revenue was driven by RMB87mn net increase in revenue from home renovation services, and RMB227mn increase in revenue from rental property management services. We forecast a 2021-2024 revenue CAGR for the segment of 79.8%, with revenue reaching RMB13.6bn in 2024, mainly driven by the consolidation of Shengdu.

Figure 43: Beike: emerging and other services GTV	Figure 44: Beike: emerging and other services revenue
Source: Company data, CMBIGM estimates	Source: Company data, CMBIGM estimates
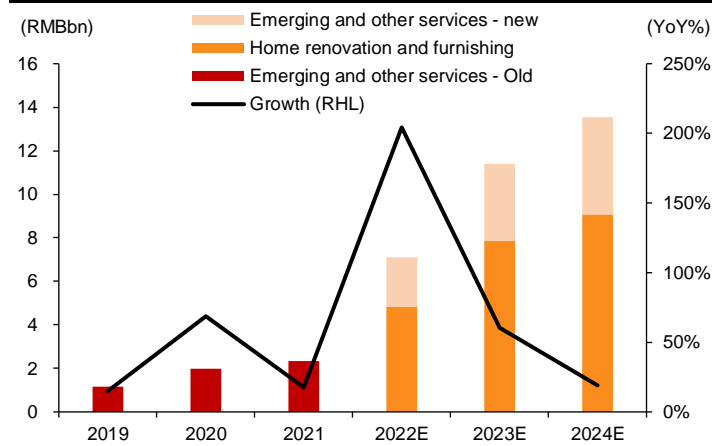
As emerging and other services can efficiently utilize Beike's infrastructure in terms of technologies and connections to clients, it requires relatively low variable and direct costs to deliver. Emerging and other services maintained a relative high contribution margin over 2019-2021. However, as Shengdu bears material cost in operation and has low contribution margin profile (contribution margin for home renovation business in 3Q22: 29.4%), we expect the consolidation of Shengdu to weigh on overall margin profile. We estimate segmental contribution margin to be 31.4/31.4/31.5% in 2022/2023/2024.

Figure 45: Emerging and other services: contribution profit and contribution margin
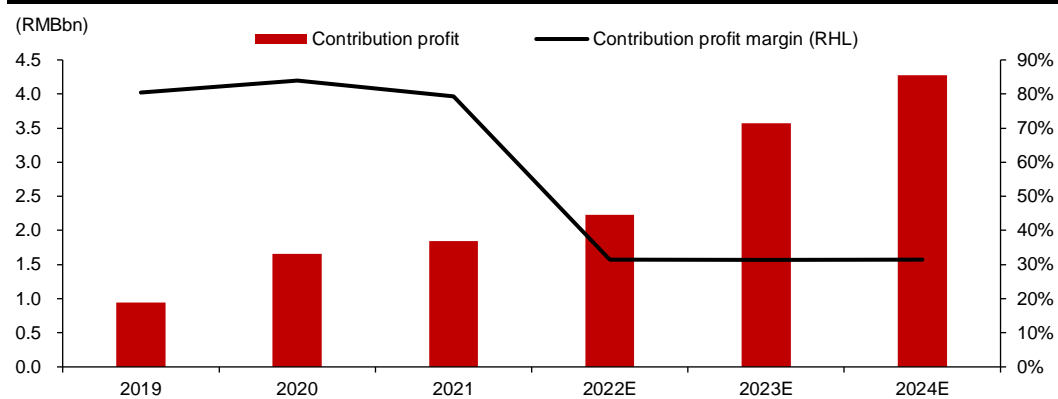
Source: Company data, CMBIGM estimates

Margin trend analysis

Beike's total cost of revenue was RMB64.8bn in 2021, up 21.0% YoY. Its cost of revenue primarily consists of: 1) compensation to internal agents and sales professionals; 2) commissions to connected agents and other sales channels; 3) costs related to Lianjia stores; and 4) others. The four parts accounted for 48.9/40.6/5.9/4.6% of total cost of revenue and 39.3/32.6/4.7/3.7% of total revenue in 2021, respectively.

Figure 46: Beike: cost of revenue and growth trend

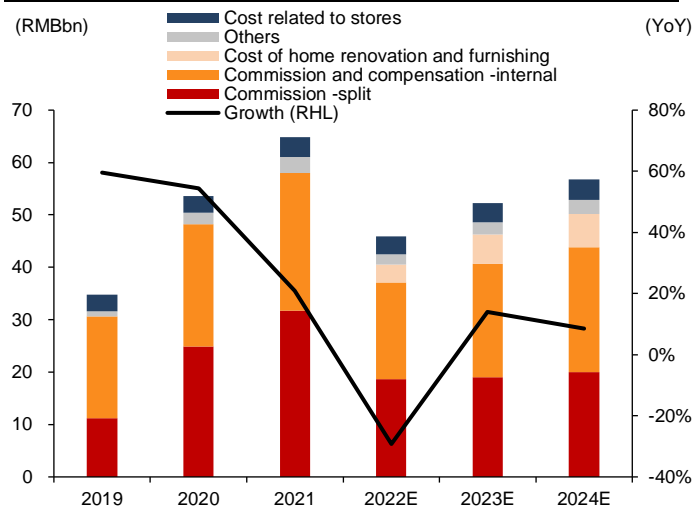

Source: Company data, CMBIGM estimates

Figure 47: Beike: cost of revenue breakdown
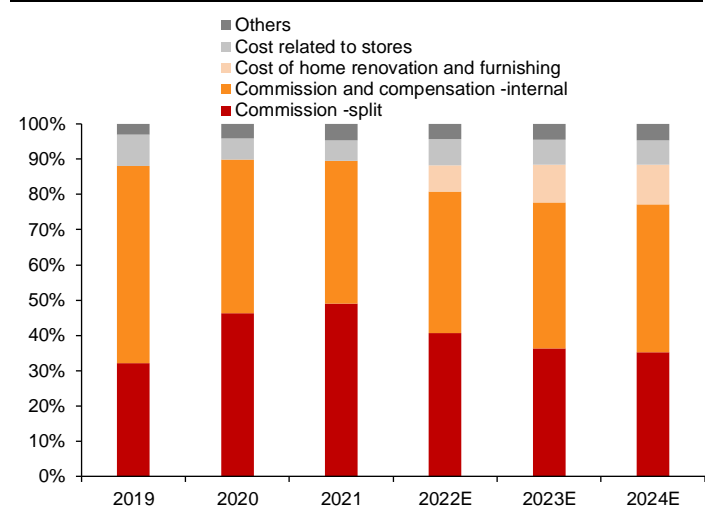
Source: Company data, CMBIGM estimates

Overall gross margin was 19.6% in 2021, down from 23.9% in 2020, driven by the increase in commission spilt as a percentage of revenue (from 35.3% in 2020 to 39.3% in 2021), which can be attributed to the fast growth of GTV transacted in Beike's connected agents and brands network, especially for the new home sales. We estimate that as a percentage of revenue, the commission split to decrease to 31.8/27.3/26.0% of total in 2022/2023/2024E, driven by: 1) optimization in channel cost of new home business; 2) optimized commission split to agents of existing home business; 3) separate disclosure for cost line of home renovation and furnishing business, as previously part of the cost is contained in commission split. We expect this will drive an overall improvement of gross margin to 21.9/24.8/25.9% in 2022/2023/2024E.

Figure 48: Cost of revenue as percentage of revenue and gross margin
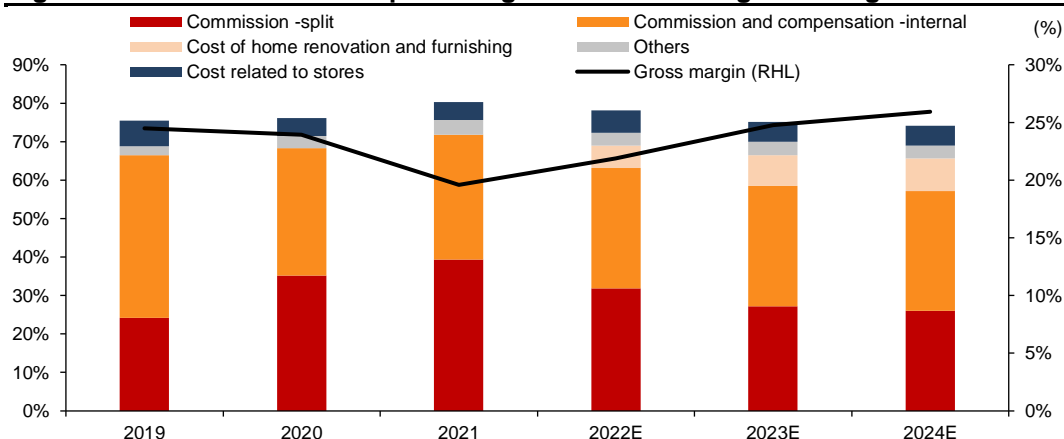
Source: Company data, CMBIGM estimates

As a percentage of revenue, Beike's sales and marketing expense/research and development expense/general and administrative expense was 5.3/4.0/11.1% in 2021, compared to 5.3/3.5/10.8% in 2020. Although Beike adopted stringent cost saving measures, driven by decline in revenue generation, we estimate sales and marketing

expense ratio to increase slightly to 7.3% in 2022E, but to decline to 7.0/6.8% in 2023/2024E with recovery in revenue. We also estimate a slight increase in research and development expense ratio in the near term to 7.0% of total revenue in 2022E, but forecast a optimization trend to 6.2/5.9% in 2023/2024E.

Figure 49: Beike: operating expenses and ratios
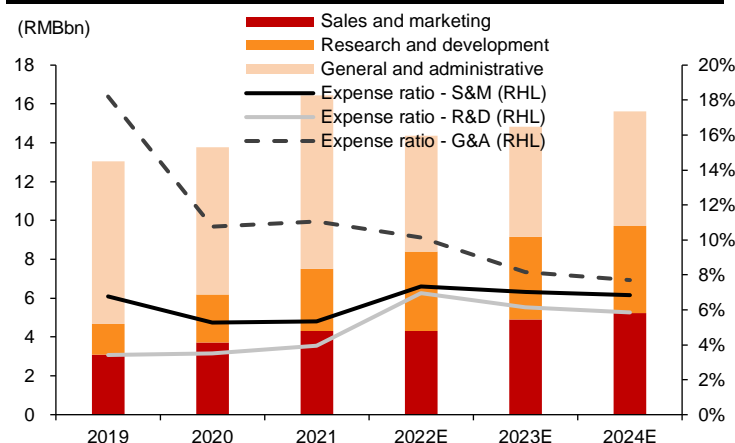
Source: Company data, CMBIGM estimates

Figure 50: Beike: margin trend
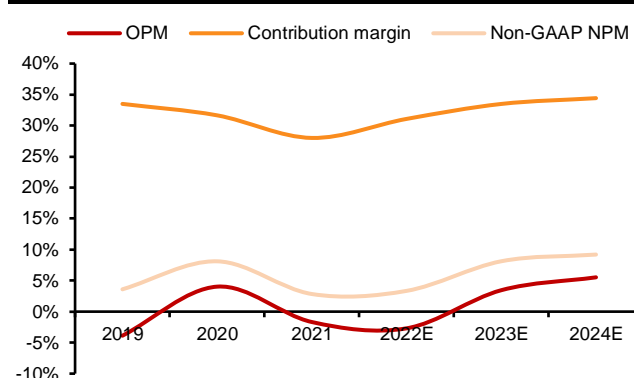
Source: Company data, CMBIGM estimates

Overall GAAP operating margin/non-GAAP net margin declined from 4.0/8.1% in 2020 to -1.7/+2.8% in 2021, due mainly to the decline in gross margin. We estimate OPM to deteriorate to -2.7% in 2022E, driven by decline in revenue generation which caused operating deleverage, but to improve to 3.5/5.5% in 2023/2024E, driven by recovery in revenue generation and an improvement in gross margin. We estimate non-GAAP net profit of RMB2.0/5.6/7.0bn in 2022/2023/2024, representing a 2021-2024 CAGR of 45%, and 2022-2024E CAGR of 89%.

Appendix

Figure 51: Beike: management profile

| Directors and Executive Officers	Position/Title	Introduction
PENG Yongdong	Chairman and Chief Executive Officer	Peng Yongdong has served as the chairman of Beike's board of directors since May 2021 and Beike's executive director since December 2018; he co-founded Beike with Mr ZUO Hui*full name? OR cut "he co-founded Beike with Mr ZUO *. Peng has been the chief executive officer of Lianjia.com (Beijing) Technology Co., Ltd., which later changed its name to Beike Zhaofang (Beijing) Technology Co., Ltd., since 2017 and the vice general manager of Beijing Lianjia since 2010. Prior to that, he was a senior consultant of strategy and revolution at IBM (2006-2010) and a senior manager at BEL (2001-2004).
SHAN Yigang	Executive Director	Shan Yigang has served as Beike's executive director since July 2018. He has been a director of Beijing Lianjia since 2007. Prior to joining Beijing Lianjia, Mr Shan was the co-founder of Dalian Haowangjiao Real Estate Brokerage Co., Ltd., from 1999 to 2007.
XU Tao	Chief Financial Officer	Xu Tao has served as the chief financial officer of Beike Zhaofang (Beijing) Technology Co., Ltd. since 2016. Prior to that, Mr Xu served as the chief financial officer of SenseTime Technology (China) Co., Ltd., the chief financial officer of Didi Infinity Technology Development Limited Company, the chief financial officer of Dimension Data Information Technology (Beijing) Co., Ltd, the financial director of China in Sun Microsystems China Co., Ltd, the chief financial officer at Lucent Technology (China) Co., Ltd., and the financial manager of Beijing Sohu Internet Information Service Co., Ltd.
XU Wangang	Executive Director and Chief Operating Officer	Xu Wangang is Beike's executive director and chief operating officer, and served as Beike's co-chief operating officer from 2018 to April 2021. Prior to that, he worked as the general manager and the head of the western region from 2015 to 2018 at Chengdu Lianjia Real Estate Brokerage Co., Ltd., an affiliate of Beike. Between 2004 and 2015, Mr Xu served as the general manager of Sichuan Yicheng Real Estate Brokerage Co., Ltd. He started his career as a staff member in technology R&D at No.10 Research Institute of Ministry of Information Industries and its affiliates (now known as China Electronics Technology Group Corporation No.10 Research Institute) in 1986, where he was later promoted to being a manager.

Source: Company data, CMBIGM

Figure 52: Beike: shareholding structure
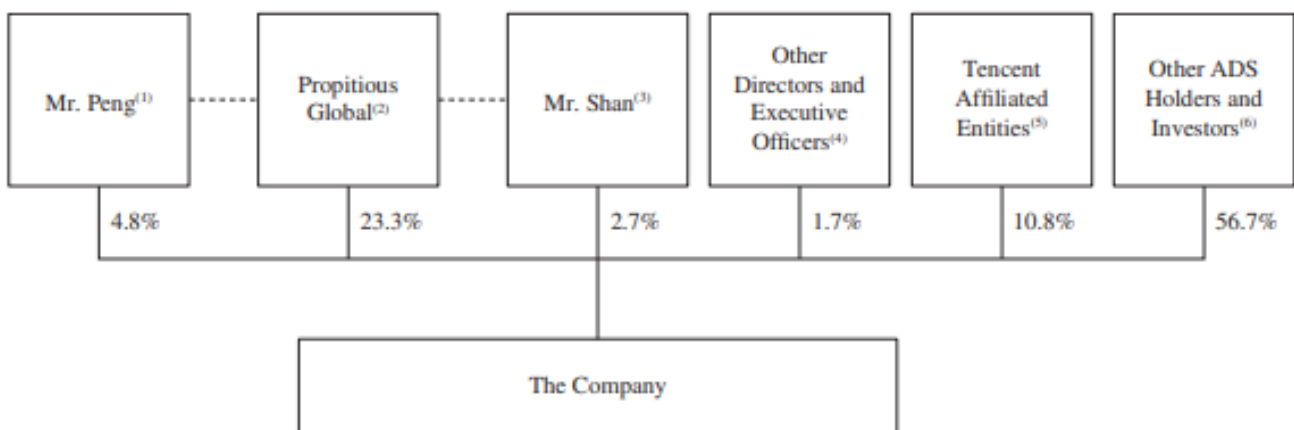
Note: as of 5 May 2022
Source: Company data, CMBIGM

Financial Summary

INCOME STATEMENT	2019A	2020A	2021A	2022E	2023E	2024E
YE 31 Dec (RMB mn)						
Revenue	**46,015**	**70,481**	**80,752**	**58,744**	**69,515**	**76,594**
Cost of goods sold	(34,747)	(53,621)	(64,933)	(45,890)	(52,278)	(56,736)
Gross profit	**11,268**	**16,860**	**15,819**	**12,853**	**17,237**	**19,858**
Operating expenses	**(13,054)**	**(14,018)**	**(17,174)**	**(14,435)**	**(14,837)**	**(15,620)**
SG&A expense	(11,482)	(11,304)	(13,234)	(10,273)	(10,558)	(11,135)
R&D expense	(1,571)	(2,478)	(3,194)	(4,086)	(4,279)	(4,485)
Others	0	(236)	(747)	(76)	0	0
Operating profit	**(1,786)**	**2,842**	**(1,355)**	**(1,582)**	**2,400**	**4,238**
Other income	431	781	1,702	1,192	953	763
Other expense	(54)	(2)	(163)	(685)	0	0
Investment gain/loss	(109)	473	565	(378)	0	0
Share of (losses)/profits of associates/JV	11	(34)	37	45	0	0
Interest income	230	163	355	687	727	925
Pre-tax profit	**(1,276)**	**4,223**	**1,141**	**(721)**	**4,080**	**5,926**
Income tax	(904)	(1,609)	(1,665)	(1,200)	(1,530)	(1,980)
After tax profit	**(2,180)**	**2,614**	**(525)**	**(1,921)**	**2,550**	**3,946**
Minority interest	(3)	(1)	1	1	1	1
Net profit	**(2,184)**	**2,613**	**(524)**	**(1,920)**	**2,551**	**3,947**
Core net profit	**(4,050)**	**922**	**(524)**	**(1,920)**	**2,551**	**3,947**
Adjusted net profit	**1,656**	**5,720**	**2,294**	**1,965**	**5,647**	**7,047**

BALANCE SHEET	2019A	2020A	2021A	2022E	2023E	2024E
YE 31 Dec (RMB mn)						
Current assets	**51,912**	**87,539**	**69,926**	**67,241**	**74,955**	**82,792**
Cash & equivalents	24,319	40,970	20,446	23,516	31,136	39,927
Restricted cash	7,380	8,567	6,286	6,600	6,930	7,277
Account receivables	8,093	13,184	9,325	4,374	4,363	3,219
Other current assets	12,120	24,818	33,869	32,750	32,526	32,368
Non-current assets	**15,353**	**16,756**	**30,393**	**30,309**	**30,258**	**30,279**
PP&E	1,134	1,472	1,972	1,710	1,411	1,107
Right-of-use assets	5,625	6,821	7,244	7,969	8,765	9,642
Intangibles	2,560	1,643	1,141	595	47	(506)
Goodwill	2,477	2,467	1,806	1,806	1,806	1,806
Other non-current assets	3,556	4,353	18,230	18,230	18,230	18,230
Total assets	**67,265**	**104,296**	**100,319**	**97,550**	**105,213**	**113,071**
Current liabilities	**27,798**	**33,633**	**28,936**	**25,665**	**28,206**	**29,437**
Short-term borrowings	720	0	260	260	260	260
Account payables	4,213	6,595	6,009	7,921	9,167	9,948
Other current liabilities	17,046	20,728	15,361	11,329	12,460	12,869
Lease liabilities	2,223	2,626	2,753	2,753	2,753	2,753
Contract liabilities	593	734	1,102	1,102	1,102	1,102
Accrued expenses	3,003	2,950	3,451	2,301	2,465	2,505
Non-current liabilities	**7,932**	**3,870**	**4,327**	**4,327**	**4,327**	**4,327**
Long-term borrowings	4,890	0	0	0	0	0
Other non-current liabilities	3,042	3,870	4,327	4,327	4,327	4,327
Total liabilities	**35,730**	**37,503**	**33,263**	**29,993**	**32,533**	**33,764**
Share capital	0	0	0	0	0	0
Retained earnings	(11,776)	(9,228)	(9,843)	(11,763)	(9,212)	(5,264)
Other reserves	43,224	75,993	76,817	79,240	81,812	84,492
Total shareholders equity	**31,448**	**66,765**	**66,974**	**67,477**	**72,600**	**79,228**
Minority interest	87	27	82	81	80	79
Total equity and liabilities	**67,265**	**104,296**	**100,319**	**97,550**	**105,213**	**113,071**

CASH FLOW	2019A	2020A	2021A	2022E	2023E	2024E
YE 31 Dec (RMB mn)						
Operating						
Profit before taxation	**(1,276)**	**4,223**	**1,141**	**(721)**	**4,080**	**5,926**
Depreciation & amortization	1,039	1,174	1,158	1,481	1,558	1,638
Tax paid	904	1,609	1,665	1,200	1,530	1,980
Change in working capital	(1,762)	2,991	32	1,704	1,992	1,663
Others	1,207	(635)	(402)	8	(488)	(1,278)
Net cash from operations	**113**	**9,362**	**3,595**	**3,672**	**8,673**	**9,928**
Investing						
Capital expenditure	(703)	(887)	(1,430)	(659)	(710)	(782)
Acquisition of subsidiaries/ investments	785	(13,198)	(9,876)	0	0	0
Others	(3,956)	(892)	(13,578)	498	(26)	(19)
Net cash from investing	**(3,874)**	**(14,978)**	**(24,884)**	**(161)**	**(736)**	**(802)**
Financing						
Net borrowings	8,831	(720)	260	(127)	13	12
Proceeds from share issues	15,844	0	0	0	0	0
Others	(1,648)	26,126	(1,334)	0	0	0
Net cash from financing	**23,026**	**25,406**	**(1,074)**	**(127)**	**13**	**12**
Net change in cash						
Cash at the beginning of the year	12,760	31,931	49,537	26,732	30,116	38,066
Exchange difference	(95)	(2,184)	(442)	0	0	0
Cash at the end of the year	**31,931**	**49,537**	**26,732**	**30,116**	**38,066**	**47,204**
GROWTH	**2019A**	**2020A**	**2021A**	**2022E**	**2023E**	**2024E**
YE 31 Dec						
Revenue	60.6%	53.2%	14.6%	(27.3%)	18.3%	10.2%
Gross profit	64.0%	49.6%	(6.2%)	(18.7%)	34.1%	15.2%
Operating profit	na	na	na	na	na	76.6%
Net profit	na	na	na	na	na	54.7%
Adj. net profit	1,166.0%	245.4%	(59.9%)	(14.3%)	187.4%	24.8%
PROFITABILITY	**2019A**	**2020A**	**2021A**	**2022E**	**2023E**	**2024E**
YE 31 Dec						
Gross profit margin	24.5%	23.9%	19.6%	21.9%	24.8%	25.9%
Operating margin	(3.9%)	4.0%	(1.7%)	(2.7%)	3.5%	5.5%
Adj. net profit margin	3.6%	8.1%	2.8%	3.3%	8.1%	9.2%
Return on equity (ROE)	(9.4%)	5.3%	(0.8%)	(2.9%)	3.6%	5.2%
GEARING/LIQUIDITY/ACTIVITIES	**2019A**	**2020A**	**2021A**	**2022E**	**2023E**	**2024E**
YE 31 Dec						
Net debt to equity (x)	(0.6)	(0.6)	(0.3)	(0.3)	(0.4)	(0.5)
Current ratio (x)	1.9	2.6	2.4	2.6	2.7	2.8
VALUATION	**2019A**	**2020A**	**2021A**	**2022E**	**2023E**	**2024E**
YE 31 Dec						
P/E	na	na	204.8	na	na	57.2
P/E (diluted)	na	na	208.6	na	na	57.2
P/B	na	2.8	2.9	2.2	2.0	1.8
P/CFPS	na	56.3	139.0	48.2	18.2	15.9

Source: Company data, CMBIGM estimates. Note: The calculation of net cash includes financial assets.

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