FOUNDATION

Wise Talent Information Technology

Redefining the Recruitment Market in China; Initiate at OW

⌁ Stock Rating	◉ Industry View	◎ Price Target
Overweight	In-Line	HK$38.00

Structural industry tailwinds and the company's distinctive online recruitment solutions position it well in the most monetizable segment of the recruitment market in China, driving higher revenue growth than peers. AlphaWise data further supports our rating.

Structural tailwinds in China's recruitment market: Online recruitment market revenue in China has expanded at a 24% CAGR since 2010 to Rmb6.1bn in 2017 and we expect a 20% CAGR or higher over 2017-20. The distinctive features of this vertical include: 1) *online revenue penetration is only at 9%* and even lower at 1% for the mid- to high-end segment, according to China Insights Consultancy (2017), much lower than other verticals at 14-81%, 2) *The winner doesn't take all* - Despite the emergence of LinkedIn, other online platforms and even social networks over the last two decades, the revenue growth and margins of existing players have remained stable as the budget for online channels keeps rising and most employers pay multiple platforms, a trend that is supported by our AlphaWise Survey of 200 HR managers in 1H17.

We expect a stronger revenue CAGR of 44% for Wise Talent (also known as Liepin) over 2017-20. In addition to the tailwinds outlined above, Liepin benefits from focusing on the most monetizable mid- to high-end segment, which is growing faster than the overall market, and a structural shift from job boards to technology-enabled talent searches. Liepin facilitates large volume hiring efficiently and reduces the cost of hiring by as much as 50% compared to offline headhunters. Thus, we anticipate market share gains and project revenue and FCF CAGRs of 44% and 68% over 2017-20, respectively, and operating margin to expand from 3% in 2017 to 27% in 2020.

Concerns: 1) Intensifying competition as peers invest more in technology and move up the ladder, and 2) Margin uncertainty as Liepin would need to maintain R&D and sales marketing to grow its database (currently less than a third the size of peers) and improve its sales efficiency.

DCF PT of HK$38 (WACC of 14%, terminal growth of 3%), implying 2020 P/E of 25x. We think the structural tailwinds justify looking out to 2020 and Liepin should trade at a premium to local peer 51job (20x P/E on consensus estimates) given stronger revenue growth and better positioning in the mid/high-end segment but not higher than global peers' SEEK (25x) and Recruit (28x), both on Morgan Stanley estimates, due to its lack of scale and regional franchise.

ALPHAWISE α
Evidence-based research

MORGAN STANLEY ASIA LIMITED+

Alex Poon
EQUITY ANALYST
Alex.Poon@morganstanley.com   +852 3963-3838

Grace Chen
EQUITY ANALYST
Grace.H.Chen@morganstanley.com   +852 2848-5835

Lavender Ng
RESEARCH ASSOCIATE
Lavender.Ng@morganstanley.com   +852 3963-0029

Wise Talent Information Technology (6100.HK, 6100 HK)

China Internet and Other Services / China

Stock Rating	Overweight
Industry View	In-Line
Price target	HK$38.00
Up/downside to price target (%)	39
Shr price, close (Aug 1, 2018)	HK$27.30
52-Week Range	HK$36.00-27.30
Sh out, dil, curr (mn)	525
Mkt cap, curr (mn)	Rmb12,425
EV, curr (mn)	Rmb11,621
Avg daily trading value (mn)	HK$103

Fiscal Year Ending	12/17	12/18e	12/19e	12/20e
ModelWare EPS (Rmb)	0.04	0.19	0.75	1.23
Revenue, net (Rmb mn)	825	1,229	1,780	2,475
EBITDA (Rmb mn)	42	92	350	682
ModelWare net inc (Rmb mn)	10	72	364	623
P/E	-	123.4	31.7	19.2
P/BV	-	4.5	4.0	3.4
RNOA (%)	(7.5)	(15.4)	(47.5)	(63.0)
ROE (%)	15.1	18.8	13.1	19.7
EV/EBITDA	-	98.1	23.9	11.0
Div yld (%)	-	-	-	-
FCF yld ratio (%)**	-	2.4	5.7	7.2
Leverage (EOP) (%)	(67.0)	(101.7)	(110.8)	(114.2)

Unless otherwise noted, all metrics are based on Morgan Stanley ModelWare framework
** = Based on consensus methodology
e = Morgan Stanley Research estimates

Contents

Key Charts

Exhibit 1: Online penetration of talent acquisition is the lowest among other verticals
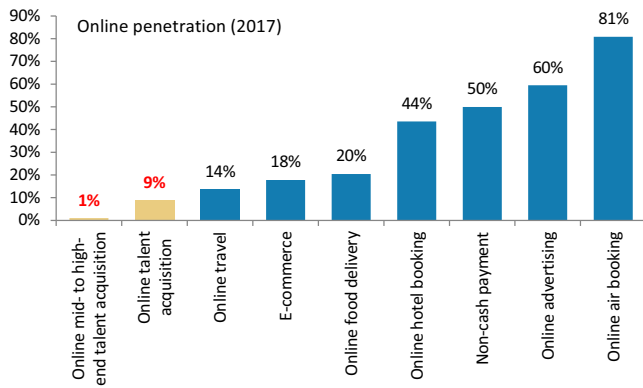
Source: iResearch, CIC, Hroot, Euromonitor, eMarketer, Morgan Stanley Research

Exhibit 2: Margins not cannibalized by new entrants

Source: Company data, Morgan Stanley Research estimates, except for 51job, where consensus data is used
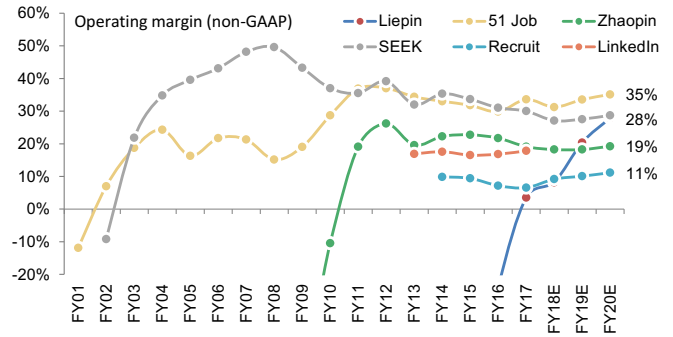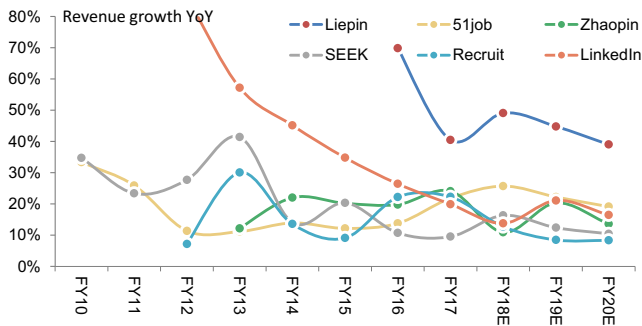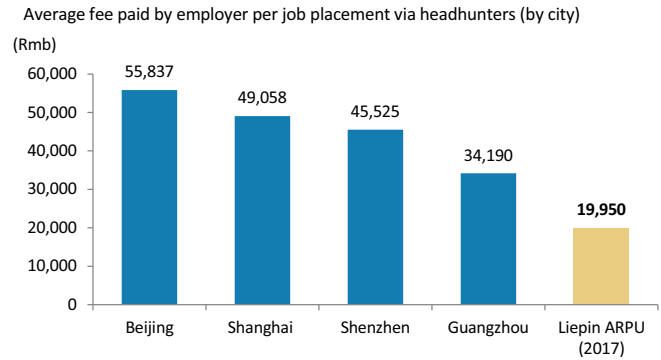
Exhibit 3: Higher revenue growth at Liepin than at global and local peers

Source: Company data, Morgan Stanley Research estimates, except for 51job, where consensus data is used.

Exhibit 4: Liepin reducing cost of hiring for employers significantly compared to headhunters

Source: HunterOn, Company data, Morgan Stanley Research

Exhibit 5: Cash revenue composition by product (2017)
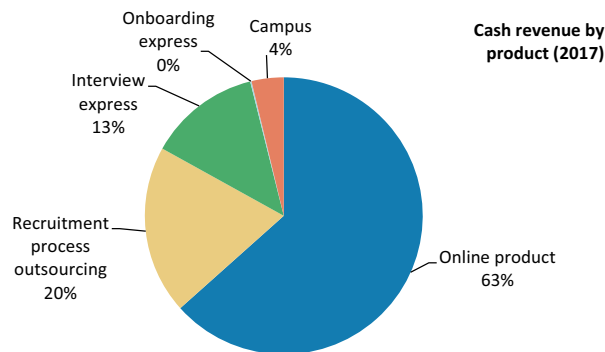
Note: Online product revenue mainly generated by CV downloads. Source: Company data, Morgan Stanley Research

Exhibit 6: Our PT (end-2019) implied CY20e P/E is at a premium to China peer 51Job but not global peers
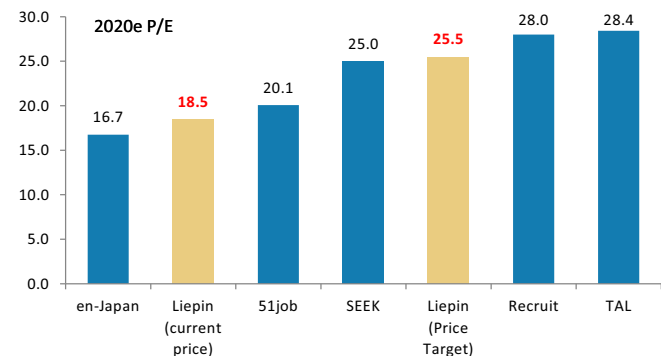
Source: Morgan Stanley Research estimates for covered companies, Thomson Reuters consensus for non-covered companies (en-Japan and 51job). As of July 31, 2018.

Exhibit 7: Industry Summary

	Unit	FY13	FY14	FY15	FY16	FY17	FY18E	FY19E	FY20E
Market size									
Human resources market									
Talent acquisition	Rmb bn	48.1	59.7	75.0	91.1	113.2	135.2	161.9	194.4
Growth YoY	%		24%	26%	21%	24%	19%	20%	20%
Mid- to High-end Talent Acquisition	Rmb bn	40.4	50.1	63.4	77.3	96.7	115.6	138.7	166.8
Growth YoY	%		24%	27%	22%	25%	20%	20%	20%
Low-end Talent Acquisition	Rmb bn	7.7	9.6	11.6	13.8	16.5	19.6	23.2	27.6
Growth YoY	%		25%	21%	19%	20%	19%	18%	19%
Human resource outsourcing	Rmb bn	73.5	87.5	105.1	123.6	151.0	179.0	212.0	251.0
Growth YoY	%		19%	20%	18%	22%	19%	18%	18%
Others	Rmb bn	36.6	44.0	53.5	63.8	79.0	95.0	114.0	138.0
Growth YoY	%		20%	22%	19%	24%	20%	20%	21%
Total HR market revenue	Rmb bn	158.2	191.2	233.6	278.5	343.2	409.2	487.9	583.4
Growth YoY	%		21%	22%	19%	23%	19%	19%	20%
Online platforms									
Online recruitment revenue (Analysys)	Rmb bn	2.7	3.2	3.9	5.0	6.1	7.5	9.1	11.1
Growth YoY	%	19%	19%	20%	29%	22%	22%	22%	21%
Liepin	Rmb mn			346	587	823	1,228	1,778	
51job (consensus)	Rmb mn			1,356	1,547	1,872	2,455	3,002	
Zhaopin	Rmb mn			1,069	1,308	1,609	1,827	2,249	
Others	Rmb mn				1,578	1,837	1,982	2,110	
Enterprises									
No of SMEs	mn	57.8	62.8	68.9	76.1	83.2	89.9	96.4	
Growth YoY	%	8%	9%	10%	10%	9%	8%	7%	
No of employers using online recruitment	mn	2.0	2.5	3.3	4.3	5.4	6.6	7.7	
Growth YoY	%	21%	29%	31%	29%	25%	23%	18%	
Online penetration	%	3.4%	4.0%	4.8%	5.6%	6.4%	7.3%	8.0%	
Job seekers									
Employment market									
Employed population	mn	770	773	775	776	776	777	777	778
Growth YoY	%	0.4%	0.4%	0.3%	0.2%	0.0%	0.0%	0.0%	0.0%
No of urban employees	mn	382	393	404	414	426	437	449	461
Growth YoY	%	3.1%	2.8%	2.8%	2.5%	2.7%	2.7%	2.7%	2.7%
As % of total employed population	%	49.7%	50.9%	52.2%	53.4%	54.8%	56.3%	57.8%	59.3%
Mid- to high-end (annual income >=Rmb100k)	mn	52	57	63	69	77	84	93	102
Other (annual income <Rmb100k)	mn	331	336	341	345	349	353	356	359
No of rural employees	mn	387	379	370	362	351	340	328	317
Growth YoY	**%**	-2.2%	-2.0%	-2.4%	-2.3%	-3.0%	-3.2%	-3.4%	-3.6%
Filled positions in talent acquisition services market									
Annual income >=Rmb100k	mn	10.3	11.8	13.6	15.4	17.7	19.9	22.5	25.5
As % of urban employees	%	20.0%	20.7%	21.5%	22.3%	23.1%	23.6%	24.3%	25.0%
Annual income <Rmb100k	mn	67.7	71.0	74.5	77.7	81.2	84.0	86.6	89.2
As % of urban employees	%	20.5%	21.1%	21.9%	22.5%	23.3%	23.8%	24.3%	24.8%
Total	mn	78.0	82.8	88.1	93.1	98.9	103.9	109.1	114.7
As % of urban employees	%	20.4%	21.1%	21.8%	22.5%	23.2%	23.8%	24.3%	24.9%
Online recruitment									
No of online job seekers	mn	103.9	115.3	128.9	144.5	161.3	178.5	193.1	
Growth YoY	%	10%	11%	12%	12%	12%	11%	8%	
As % of total employed population	%	13%	15%	17%	19%	21%	23%	25%	
As % of urban employed population	%	27%	29%	32%	35%	38%	41%	43%	

Source: CIC, Analysys, Hroot, NBS, iResearch, Morgan Stanley Research estimates

Exhibit 8: Services provided by Liepin and peers

Services provided	Liepin	51job	Zhaopin	Linkedin	Maimai	Headhunters
Campus recruitment	✓	✓	✓			
Online recruitment	✓	✓	✓	✓		
- Job posting	✓	✓	✓			
- Resume recommendation	✓	✓	✓			
- Social network	✓			✓	✓	
Recruitment process outsourcing	✓				✓	✓
Headhunting	✓				✓	✓

Source: Morgan Stanley Research

Exhibit 9: Valuation comparison of global recruitment companies

In $MM unless otherwise specified Company Name	Ticker	Share Price (Local FX)	Diluted Market Cap	EV / Revenue C2018E	C2019E	C2020E	EV / EBITDA C2018E	C2019E	C2020E	P/E (Non-GAAP) C2018E	C2019E	C2020E	PEG C2018E	2018-20E CAGR Revenue	EBITDA	EPS	2018E Margin EBITDA	Net	Revenue Scale C2018e
Wise Talent (Liepin)	6100-HK	28.45	1,915	9.0x	6.1x	4.3x	94.6x	28.9x	15.0x	NM	31.4x	18.5x	0.78x	45.3%	150.7%	161.9%	9.6%	5.7%	188
Online Recruitment																			
51job Inc	JOBS-US	91.77	5,718	8.4x	6.9x	5.7x	23.4x	18.4x	14.9x	31.7x	25.2x	20.1x	1.24x	21.4%	25.5%	N.A.	35.8%	13.3%	588
SEEK Ltd	SEK-AU	21.37	5,579	6.6x	5.9x	5.4x	19.1x	16.9x	15.1x	34.3x	29.2x	25.0x	2.00x	10.9%	12.7%	17.1%	34.5%	16.5%	979
Recruit Holdings Co Ltd	6098-TO	3055.00	46,722	2.2x	2.0x	1.9x	18.4x	17.1x	15.9x	33.2x	30.8x	28.0x	3.72x	7.2%	7.8%	8.9%	11.7%	6.7%	20,846
en-japan Inc	4849-JA	5290.00	2,352	4.1x	3.6x	3.3x	14.2x	12.0x	10.3x	24.3x	20.4x	16.7x	1.19x	11.9%	17.6%	20.4%	28.7%	17.2%	518
Info Edge India Ltd	INFOE-IN	1366.90	2,434	13.1x	11.0x	9.3x	61.1x	45.9x	30.7x	86.6x	68.7x	44.4x	2.19x	18.8%	41.2%	39.6%	21.4%	16.3%	171
Mean				6.9x	5.9x	5.1x	27.3x	22.1x	17.4x	42.0x	34.9x	26.8x	2.07x	14.0%	20.9%	21.5%	26.4%	14.0%	4,621
Median				6.6x	5.9x	5.4x	19.1x	17.1x	15.1x	33.2x	29.2x	25.0x	2.00x	11.9%	17.6%	18.8%	28.7%	16.3%	588
Offline Recruitment	Ticker																		
Robert Half International Inc	RHI-US	75.76	9,361	1.6x	1.5x	1.4x	14.2x	13.1x	12.4x	22.0x	19.8x	18.5x	2.47x	6.7%	7.2%	12.2%	11.1%	7.3%	5,735
ManpowerGroup Inc	MAN-US	93.26	6,139	0.3x	0.3x	0.3x	7.2x	6.7x	6.0x	10.5x	10.5x	9.4x	1.87x	3.9%	9.3%	7.5%	4.0%	2.6%	22,583
Hays PLC	HAS-LN	198.70	3,786	0.5x	0.5x	0.4x	10.3x	9.3x	N.A.	16.7x	15.1x	14.1x	1.85x	6.5%	N.A.	9.0%	4.7%	2.9%	7,769
Pagegroup PLC	PAGE-LN	598.50	2,576	1.3x	1.2x	1.1x	12.0x	11.0x	10.2x	19.1x	17.1x	15.4x	1.71x	6.6%	8.4%	9.9%	10.4%	6.7%	1,949
Randstad NV	RAND-NA	54.26	11,642	0.5x	0.5x	0.4x	9.5x	8.9x	8.6x	12.0x	11.5x	11.0x	2.67x	3.1%	5.0%	5.3%	5.0%	3.0%	28,240
Adecco Group AG	ADEN-SW	60.98	10,265	0.4x	0.4x	0.4x	8.1x	7.7x	7.3x	11.0x	10.4x	9.9x	2.03x	3.4%	5.6%	6.9%	5.0%	3.1%	28,569
Mean				0.7x	0.7x	0.7x	10.2x	9.4x	8.9x	15.2x	14.1x	13.1x	2.10x	5.0%	7.1%	8.5%	6.7%	4.3%	15,808
Median				0.5x	0.5x	0.4x	9.9x	9.1x	8.6x	14.3x	13.3x	12.5x	1.95x	5.2%	7.2%	8.3%	5.0%	3.0%	15,176
Classified and Search																			
58.com Inc	WUBA-US	67.26	9,912	5.2x	4.4x	3.7x	22.8x	16.0x	12.4x	29.0x	21.1x	17.0x	0.95x	19.0%	35.5%	38.7%	22.9%	14.6%	1,808
Autohome Inc	ATHM-US	96.75	11,360	8.9x	7.0x	5.6x	23.4x	17.9x	14.0x	27.9x	22.5x	17.8x	1.11x	26.1%	29.2%	25.1%	38.1%	36.5%	1,133
Bitauto Holdings Ltd	BITA-US	24.32	1,769	1.0x	0.8x	0.7x	9.5x	3.3x	2.3x	9.4x	7.1x	5.6x	0.32x	24.8%	103.1%	29.8%	10.8%	2.4%	1,642
Fang Holdings Ltd	SFUN-US	3.24	1,439	3.9x	3.3x	2.9x	10.0x	7.7x	6.5x	11.4x	8.5x	7.0x	0.41x	14.8%	24.5%	27.7%	38.6%	27.1%	466
Sogou Inc	SOGO-US	9.21	3,658	2.1x	1.6x	1.3x	17.9x	9.9x	6.7x	31.5x	18.1x	12.4x	0.53x	29.5%	63.0%	77.6%	11.9%	7.1%	1,216
Mean				4.2x	3.4x	2.8x	16.7x	11.0x	8.4x	21.9x	15.4x	12.0x	0.66x	22.8%	51.0%	39.8%	24.5%	17.5%	1,253
Median				3.9x	3.3x	2.9x	17.9x	9.9x	6.7x	27.9x	18.1x	12.4x	0.53x	24.8%	35.5%	29.8%	22.9%	14.6%	1,216
Social Network																			
Weibo Corp	WB-US	82.75	18,466	9.7x	7.1x	5.5x	25.1x	17.8x	13.3x	29.2x	21.1x	16.1x	0.84x	32.7%	37.5%	34.6%	38.5%	32.6%	1,799
Momo Inc	MOMO-US	41.02	8,356	3.8x	2.8x	2.3x	13.7x	10.4x	8.1x	16.8x	13.5x	10.8x	0.67x	27.1%	30.2%	25.0%	27.3%	23.1%	1,988
YY Inc	YY-US	93.23	5,892	1.7x	1.3x	1.1x	8.2x	6.6x	5.6x	12.4x	10.4x	9.2x	0.76x	27.1%	21.0%	16.3%	21.2%	18.4%	2,295
Facebook Inc	FB-US	172.58	498,276	8.2x	6.5x	5.3x	16.0x	12.8x	10.5x	20.7x	17.5x	14.9x	1.16x	24.9%	23.3%	17.9%	51.7%	38.0%	55,284
Twitter Inc	TWTR-US	31.87	24,153	7.2x	6.3x	5.7x	27.3x	22.3x	18.9x	33.7x	12.3x	19.1x	1.02x	13.0%	20.1%	33.0%	26.5%	15.4%	2,927
Mean				6.1x	4.8x	4.0x	18.1x	14.0x	11.3x	22.6x	15.0x	14.0x	0.89x	25.0%	26.4%	25.3%	33.0%	25.5%	12,859
Median				7.2x	6.3x	5.3x	16.0x	12.8x	10.5x	20.7x	13.5x	14.9x	0.84x	27.1%	23.3%	25.0%	27.3%	23.1%	2,295
Platform																			
Baidu Inc	BIDU-US	247.18	86,199	4.9x	4.0x	3.3x	13.1x	9.9x	7.6x	24.2x	18.0x	14.1x	0.78x	22.1%	31.3%	31.1%	37.1%	18.4%	15,796
Alibaba Group Holding Ltd	BABA-US	187.23	485,335	12.1x	8.2x	6.2x	36.3x	31.9x	22.0x	35.8x	30.4x	23.6x	1.55x	40.1%	28.6%	23.1%	33.4%	24.5%	39,820
Tencent Holdings Ltd	0700-HK	355.20	432,630	9.1x	6.7x	5.2x	27.1x	22.5x	17.9x	37.1x	27.4x	21.6x	1.19x	32.2%	23.1%	31.2%	33.6%	25.5%	48,233
Mean				8.7x	6.3x	4.9x	25.5x	21.4x	15.8x	32.4x	25.3x	19.8x	1.17x	31.5%	27.7%	28.5%	34.7%	22.8%	34,616
Median				9.1x	6.7x	5.2x	27.1x	22.5x	17.9x	35.8x	27.4x	21.6x	1.19x	32.2%	28.6%	31.1%	33.6%	24.5%	39,820

Source: Company data, Bloomberg consensus, Morgan Stanley Research estimates for Wise Talent. PEG is based on 2018-20 CAGR. As of July 31, 2018.

Financial Summary

Exhibit 10: Financial Summary of Liepin

(Rmb mn)	FY15	FY16	FY17	FY18E	FY19E	FY20E
Income statement	Dec-15	Dec-16	Dec-17	Dec-18	Dec-19	Dec-20
Talent acquisition	336	579	796	1,151	1,605	2,165
Individual users	9	8	27	76	174	308
Others	-	-	2	2	2	2
Revenue	**346**	**587**	**825**	**1,229**	**1,780**	**2,475**
Cost of revenue	(49)	(91)	(132)	(204)	(324)	(459)
- Service and project	(37)	(61)	(92)	(150)	(257)	(379)
- Staff costs	(7)	(23)	(31)	(39)	(47)	(53)
- IT infrastructure	(5)	(7)	(9)	(15)	(20)	(26)
Gross profit	**296**	**496**	**693**	**1,025**	**1,456**	**2,016**
Other income	2	9	6	3	9	26
Sales and marketing	(408)	(482)	(487)	(646)	(776)	(925)
- Staff costs	(214)	(292)	(373)	(486)	(611)	(755)
- Advertising and promotion	(157)	(147)	(70)	(112)	(114)	(116)
- Others	(37)	(43)	(45)	(49)	(52)	(54)
General and administrative	(62)	(81)	(94)	(166)	(153)	(175)
- Staff costs	(51)	(59)	(64)	(81)	(97)	(113)
- Others	(12)	(22)	(30)	(84)	(56)	(62)
Research and development	(66)	(86)	(92)	(141)	(201)	(275)
- Staff costs	(57)	(65)	(68)	(113)	(170)	(241)
- Others	(9)	(22)	(24)	(27)	(31)	(34)
Operating profit	**(239)**	**(144)**	**26**	**76**	**335**	**668**
Net finance income/(cost)	8	4	(19)	(5)	26	42
Profit before taxation	**(231)**	**(140)**	**8**	**70**	**362**	**710**
Income tax	-	-	-	-	-	(89)
Net profit	**(231)**	**(140)**	**8**	**70**	**362**	**621**
Non-controlling interests	-	(1)	(1)	-	-	-
Equity owners of the company	(231)	(139)	9	70	362	621
Balance sheet						
Cash and cash equivalents	92	129	251	2,811	3,502	4,379
Time deposits with banks	-	416	399	399	399	399
Others	158	143	223	241	265	294
Current assets	**250**	**688**	**873**	**3,451**	**4,166**	**5,072**
Non-Current assets	**70**	**86**	**70**	**69**	**65**	**63**
Total assets	**321**	**774**	**942**	**3,520**	**4,231**	**5,135**
Trade and other payables	73	87	108	183	261	342
Deferred revenue	255	320	444	561	796	949
Others	172	302	2	2	2	2
Current liabilities	**500**	**710**	**554**	**746**	**1,059**	**1,293**
Total liabilities	**500**	**710**	**554**	**746**	**1,059**	**1,293**
Retained profits / (losses)	(588)	(727)	2	72	434	1,055
Other reserves	409	791	383	2,698	2,734	2,783
Non-controlling interests	-	(0)	4	4	4	4
Total equity	**(179)**	**64**	**388**	**2,774**	**3,172**	**3,842**
Cash flow statement						
Operating cash flows	(80)	(62)	191	288	702	889
Investing cash flows	(145)	(384)	(10)	(16)	(11)	(12)
Financing cash flows	260	483	(57)	2,287	-	-
FX change	-	0	(2)	-	-	-
Net change in cash	**35**	**37**	**122**	**2,559**	**692**	**877**
Cash balance b/f	57	92	129	251	2,811	3,502
Cash balance c/f	**92**	**129**	**251**	**2,811**	**3,502**	**4,379**

(Rmb mn)	FY15	FY16	FY17	FY18E	FY19E	FY20E
Operating metrics	Dec-15	Dec-16	Dec-17	Dec-18	Dec-19	Dec-20
Talent acquisition (to B)						
Business users (,000)	75.1	160.4	248.6	336.6	428.6	524.6
Business paying users (,000)	20.1	31.0	39.9	52.2	66.4	82.3
- Old customers	9.3	14.4	19.9	27.5	36.9	48.2
- New customers	10.8	16.6	20.0	24.8	29.5	34.1
Paying ratio	27%	19%	16%	16%	15%	16%
ARPPU (Rmb)	16,701	18,691	19,950	22,035	24,168	26,310
- Old customers	19,440	24,200	24,460	26,295	28,135	29,964
- New customers	14,334	13,923	15,459	17,314	19,218	21,140
Individual users (to C)						
Individual users (mn)	25.0	32.7	38.9	46.7	54.6	62.5
Individual paying users (,000)	60.2	66.7	89.6	179.4	313.7	471.5
Paying ratio	0.24%	0.20%	0.23%	0.38%	0.57%	0.75%
ARPPU (Rmb)	153	127	304	426	553	653
No of staff						
Operations and customer services			90	105	116	125
Sales and support			2,196	2,526	2,830	3,145
Sales team	976	1,314	1,323	1,548	1,765	1,994
Support team			873	978	1,066	1,151
Product development			43	55	68	82
Research and development			228	292	362	434
General and administrative			234	274	301	324
Total			**2,791**	**3,252**	**3,677**	**4,109**
P/L metrics						
Revenue growth		**70%**	**40%**	**49%**	**45%**	**39%**
Talent acquisition		72%	38%	45%	39%	35%
Individual users		-8%	221%	180%	127%	77%
GAAP measures						
Gross margin	86%	85%	84%	83%	82%	81%
Operating margin	-69%	-25%	3%	6%	19%	27%
Net margin	-67%	-24%	1%	6%	20%	25%
EBITDA margin	-67%	-22%	5%	8%	20%	28%
S&M as % of rev	118%	82%	59%	53%	44%	37%
G&A as % of rev	18%	14%	11%	13%	9%	7%
R&D as % of rev	19%	15%	11%	11%	11%	11%
Non-GAAP measures						
Operating profit	(232)	(142)	29	101	362	691
Net profit	(222)	(128)	17	99	397	670
EBITDA	(224)	(128)	45	118	377	705
Gross margin	86%	85%	84%	83%	82%	81%
Operating margin	-67%	-24%	4%	8%	20%	28%
Net margin	-64%	-22%	2%	8%	22%	27%
EBITDA margin	-65%	-22%	5%	10%	21%	28%
SBC as % of rev	2%	2%	1%	2%	2%	2%
Effective tax rate	0%	0%	0%	0%	0%	13%

Source: Company data, Morgan Stanley Research estimates

Risk Reward Summary

Wise Talent Information Technology (also known as Liepin)

Redefining the recruitment market in China
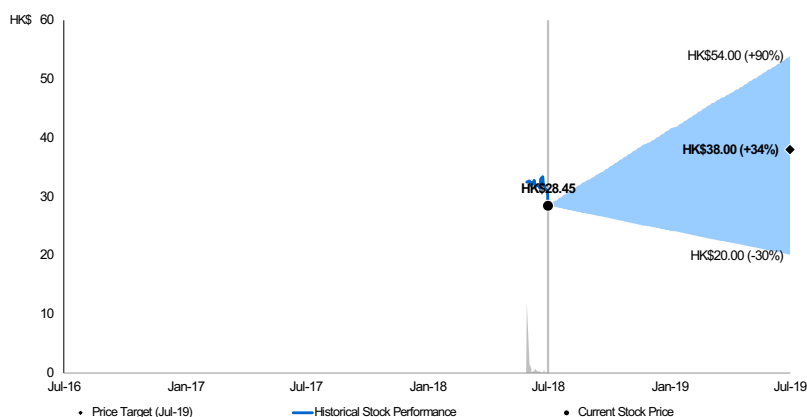
Source: Thomson Reuters, Morgan Stanley Research estimates. As of July 31, 2018.

Price Target   **HK$38.0**
Base case, DCF valuation (WACC of 14% and terminal growth of 3%)

Bull   **HK$54.0**
25x bull case non-GAAP 2020e EPS
Faster-than-expected transformation from traditional recruitment channels to the platform's unique solutions: Total revenue to increase at 54% CAGR over 2017-20, driven by 36% growth in the number of business customers. Non-GAAP operating margin reaches 35% in 2020.

Base   **HK$38.0**
25x base case non-GAAP 2020e EPS
Sustained growth driven by increasing number of paying users, hiring demand and efficiency: Total revenue to increase at 44% CAGR over 2017-20, driven by 27% growth in the number of business customers. Non-GAAP operating margin reaches 28% in 2020.

Bear   **HK$20.0**
27x bear case non-GAAP 2020e EPS
Slower-than-expected margin expansion due to lower-than-expected sales efficiency: Total revenue to increase at 34% CAGR over 2017-20, driven by 19% growth in the number of business customers. Non-GAAP operating margin reaches 16% in 2020.

Investment Thesis

■ Liepin focuses on the mid- to high-end talent acquisition market (job seekers with annual salary over Rmb100,000), the most monetizable segment within the human resources market in China.

■ Liepin's distinctive online recruitment solutions use AI and headhunters to provide better job matching efficiencies and lower the hiring cost for employers by as much as 50% compared to traditional offline headhunters.

■ China's recruitment market benefits from structural tailwinds including: 1) low online penetration at 9% (mid- to high-end segment at 1%), 2) low cannibalization risk, 3) China's transition towards higher income status creating more jobs in the tertiary/higher income segments, and 4) a structural shift from job boards to technology-enabled talent acquisition platforms. These trends are supported by our AlphaWise survey in 1H17.

■ We think the stock should trade at a premium to local peer 51Job given higher revenue growth and better positioning in the mid- to high-end segment, but not be more expensive than global peers due to its lack of scale and regional franchise.

Key Value Drivers

■ Number of business customers.
■ Retention rate of users.
■ Margin expansion/contraction (mainly from changes in sales and marketing expense).

Risks to Achieving Price Target

■ **Downside**: 1) Intensifying competition as peers invest more in technology and penetrate into the mid- to high-end segment; 2) Lower-than-expected margins due to lower sales efficiency, smaller user base than peers, and rising competition.

Investment Summary

We initiate coverage on Liepin at OW with a price target of HK$38.0. The company focuses on the mid- to high-end talent acquisition market (job seekers with annual salary over Rmb100,000), the most monetizable segment within the China human resources market. We expect Liepin's distinctive online recruitment solutions to gain market share in the mid- to high-end segment by lowering the cost of hiring for employers by as much as 50% compared to traditional offline headhunters (fees based on 20-30% of annual salary vs. 10-15% for Liepin), while expanding the overall market size at the same time by galvanizing passive job seekers and allowing more employers to use headhunting services at cheaper cost, a win-win situation. The company has achieved an 86% revenue renewal rate in both 2016 and 2017.

In addition, the China recruitment market benefits from structural tailwinds including: 1) low online penetration at 9%, and even lower at 1% for the mid- to high-end talent acquisition market, compared to 14-81% for other verticals, 2) the winner does not take all as online penetration remains low and most companies pay multiple platforms for different hiring needs, 3) China's transition towards high income status creating more jobs in the higher income/tertiary industries, and 4) a structural shift from job boards to technology-enabled talent acquisition platforms. These trends are supported by our AlphaWise Survey of 200 human resources managers in 1H17, which suggests that employers are raising their total hiring budget and allocation to online channels, and they select online platforms based on brand and the screening/filtering ability.

Investment concerns - Our key concern is intensifying competition as peers like 51job and Zhaopin, which have a job seeker user base more than triple that of Liepin, invest more in technology and penetrate into the mid- to high-end segment. Although the industry did not show any visible cannibalization between peers historically mainly because of low average revenue per paying user (ARPPU) across peers, in our view, this may not be the case in the future as Liepin's ARPPU of Rmb20,000 in 2017 was much higher than peers'. Competition could pressure Liepin's ARPPU growth, sales efficiency and user/revenue renewal rate, which would weigh on margins.

DCF price target of HK$38.0 - Our price target implies 2019/20 P/E of 42x/25x. We think strong industry tailwinds justify longer term visibility to look at 2020 P/E multiples. In our view, the company should trade at a premium to local peer 51job (20x consensus) given stronger revenue growth (44% CAGR over 2017-20 vs 25% for 51job on consensus estimates) and its distinctive and improving online talent acquisition solutions customized for the most monetizable segment. However, we think Liepin should not trade above global peers SEEK (SEK.AU, covered by Andrew McLeod, 25x CY2020 on Morgan Stanley estimates) and Recruit Holdings (6098.T, covered by Tetsuro Tsusaka, 28x on Morgan Stanley estimates) due to its lack of scale and regional franchise.

Investment Positives

> We like Liepin's distinctive online recruitment solutions, which provide talent acquisition services to employers in the most monetizable mid- to high-end segment, through AI-powered tools and leveraging headhunters, and reduce the cost of hiring by as much as 50% compared to offline headhunters.
>
> We also see structural industry tailwinds including 1) rising online penetration, 2) China's transition towards high income status creating more jobs in the tertiary/high income categories, and 3) an employer preference shift from job boards to technology-enabled platforms.
>
> As Liepin is well positioned in the most monetizable segment, we expect stronger growth than at peers with revenue and FCF CAGRs of 44% and 68%, respectively, over 2017-20, and operating margin expansion from 3% in 2017 to 27% in 2020.

1. Higher ROI for employers, and Better Positioning

A. Better ROI than using offline headhunters

The company derived 96% of total revenue from business customers in 2017. We think its key competitive edge is the ability to reduce the cost of hiring for employers to about 10-15% of annual salaries of job seekers compared to offline headhunter fees of 20-30% of annual salaries. Its products are well received by employers, as shown by its high revenue renewal rate of 85.5% in 2016 and 85.8% in 2017, and we expect continuing improvement as Liepin invests in R&D (10-11% of revenue over 2018-20). In 2017, Liepin processed over 24bn personalized job and candidate recommendations and >50% of those were fed to users by AI. We also think Liepin's user database is more authentic than peers' since the profile verification process requires payment and personal ID.

Exhibit 11: Liepin targets the Rmb97bn (2017) mid- to high-end talent acquisition market which is currently dominated by headhunters

Source: CIC, Morgan Stanley Research estimates

Exhibit 12: Cost of hiring for employers is as much as 50% lower at Liepin compared to offline headhunters

Company/segment	Cost of hiring as % of annual salary of the candidate
Liepin	10-15%
Traditional offline headhunters including Zhaopin's offline executive search services	20-30%

Source: Company data, Morgan Stanley Research

Exhibit 13: Liepin's business customer ARPU is lower than the amount headhunters charge in higher tier cities

Average fee paid by employer per job placement via headhunters (by city)
(Rmb)

	Beijing	Shanghai	Shenzhen	Guangzhou	Liepin ARPU (2017)
	55,837	49,058	45,525	34,190	19,950
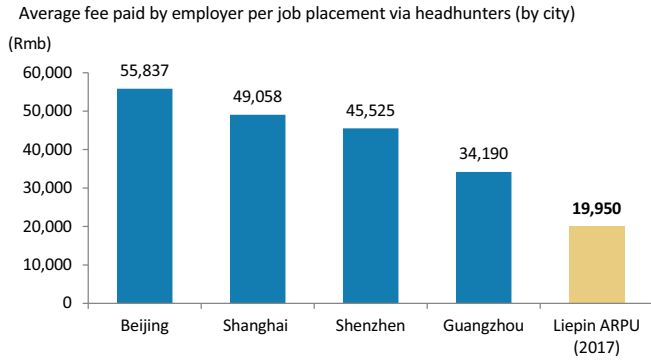
Source: HunterOn, Company data, Morgan Stanley Research

Exhibit 14: Liepin's business customer ARPU lower than headhunters' in various industries

Average fee paid by employer per job placement via headhunters (by industry)
(Rmb)

Property	Computing hardware	Financials	Internet	Manufacturing	Liepin ARPU (2017)
52,378	49,145	45,200	42,709	23,683	19,950
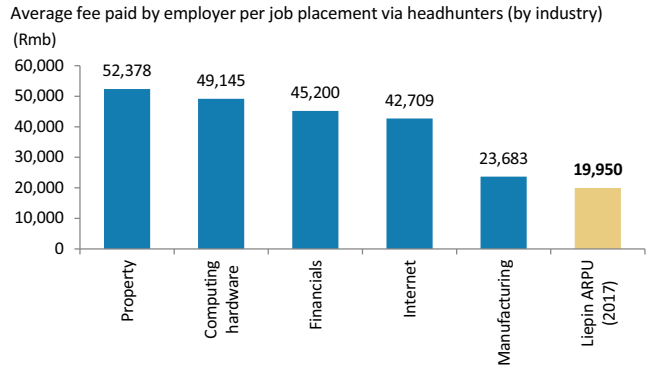
Source: HunterOn, Company data, Morgan Stanley Research

B. Better positioning than peers in the most monetizable segment

Liepin has achieved business customer ARPPU of Rmb20k in 2017, much higher than Zhaopin's Rmb3.1k and 51job's 3.6k. In 2017, the annual salary of talent placed was as high as Rmb5-6mn. While the majority of Liepin's resumes command an annual salary of above Rmb100,000, this is not the case at peers 51job and Zhaopin. Over 60% of business customers had used the transaction-based talent acquisition services provided by the headhunters, on top of AI-recommended CV download (~50% of total revenue).

Exhibit 15: Positioning in the mid to high end segment with strength in technology to improve efficiency
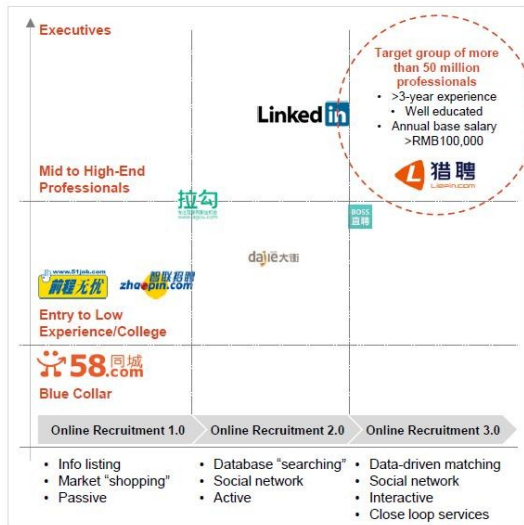
Source: Company data

Exhibit 16: Strong network effect (headhunters making frequent contact) and higher efficiency
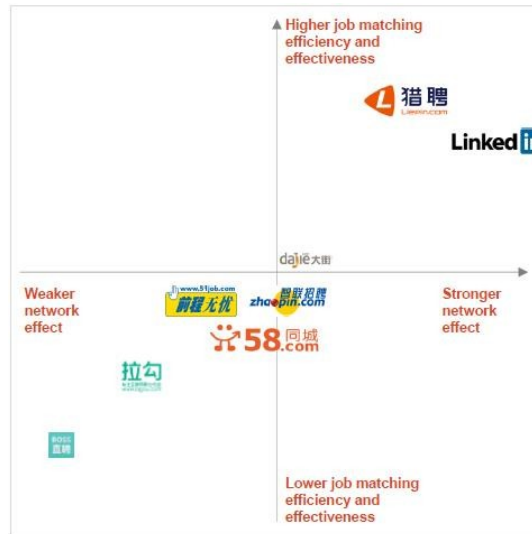
Source: Company data

Our AlphaWise survey of 200 HR managers in 1H17 revealed that better screening/shortlisting ability and recruitment websites' effectiveness are key selection criteria for business customers to choose an online platform, rather than additional services such as HR training/services.

Exhibit 17: Brand and better screening capability are key selection criteria for recruitment platforms

Key Selection Criteria for Recruitment Platform

Source: AlphaWise, Morgan Stanley Research, as of 1H17.

Exhibit 18: In choosing an online recruitment platform, employers evaluate website effectiveness

Influence on Choice of Online Recruitment Platform: Additional Services vs. Sole Effectiveness
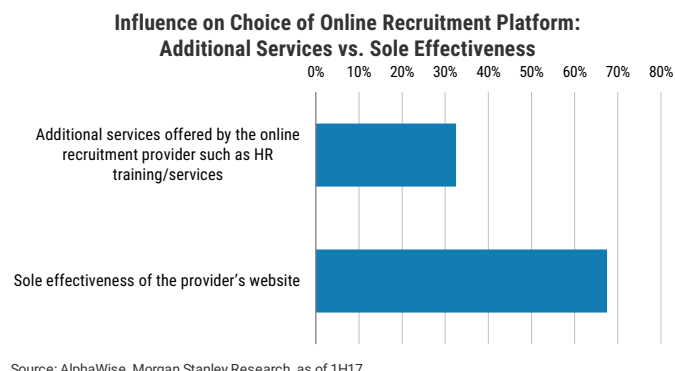
Source: AlphaWise, Morgan Stanley Research, as of 1H17.

C. Liepin expands the addressable market in two ways

We believe **1) Liepin activates passive job seekers** through its AI-assisted job recommendations. At the end of 2017, about 47.5% of individual users had updated their profile at least once during the prior 18 months, and **2) Liepin allows more employers to use headhunting/talent acquisition services at lower costs**, which they were generally unable to afford in the past, thereby deepening the penetration of the market. There were about 102k verified headhunters on Liepin at the end of 2017, nearly one third of total headhunters of 350k in China. Liepin allows the headhunters to source candidates (AI-powered) and manage their headhunting process more effectively. The annual number of contacts with individual users per headhunter increased from 5.1 in 2015 to 12.4 in 2017. Overall, China's number of SMEs has been increasing at a 10% CAGR over 2014-17, according to iResearch, and the number of employers using online recruitment platforms rose even faster at a 28% CAGR over the same period.

Exhibit 19: Number of SMEs in China
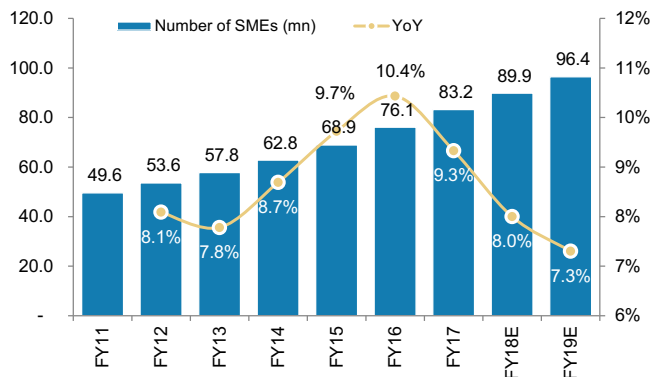
Source: iResearch, Morgan Stanley Research

Exhibit 20: Number of employers using an online recruitment platform
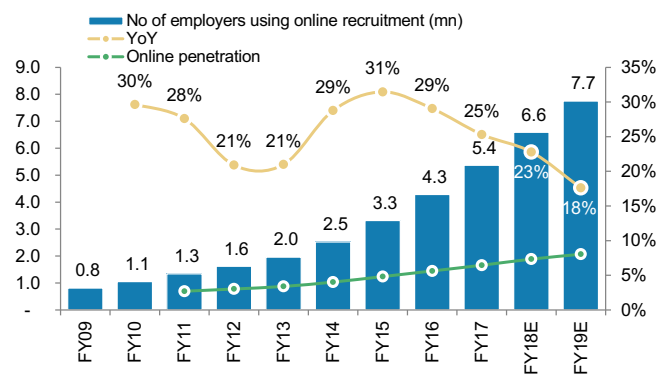
Source: iResearch, Morgan Stanley Research

2. Structural industry tailwinds

China Insights Consultancy (CIC) projects that China's mid- to high-end talent acquisition market by revenue will grow from Rmb97bn in 2017 to Rmb167bn in 2020 (20% CAGR).

A. Online penetration has significant upside

Money spent on online recruitment channels was only Rmb10bn in 2017, including Rmb1bn in the mid- to high-end segment according to CIC. This represents online penetration of only 9% and 1% respectively, much lower than online travel of 14%, e-commerce of 18%, and online delivery of 20%.

We think the growth in hiring demand (volume of candidates) will outpace the growth in hiring budgets in China in the next few years, thus there is a strong incentive for companies to use more cost-effective ways (online channels). This is consistent with our AlphaWise survey in 1H17, suggesting: 1) total average budget to grow by 23% to nearly Rmb400k per employer in 2018, and 2) the allocation towards online channels is rising, representing over 35% of the total budget in 2018 (2016: 30%). Our AlphaWise survey also revealed that companies tend to allocate budgets across many online recruitment platforms. We think this is mainly due to low online penetration as well as cheap annual ARPPU of below Rmb4,000 (51job and Zhaopin). There is also increasing usage of social networking platforms as a hiring channel.

Exhibit 21: More recruitment budgets allocated to online channels

% Budget Allocated Per Channel
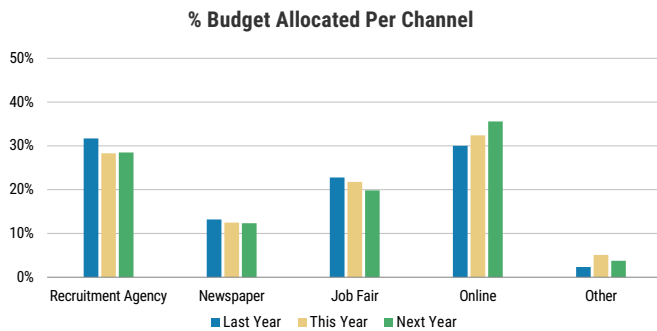
Source: AlphaWise, Morgan Stanley Research, as of 1H17.

Exhibit 22: Online penetration of talent acquisition is much lower than in other verticals

Online penetration (2017)
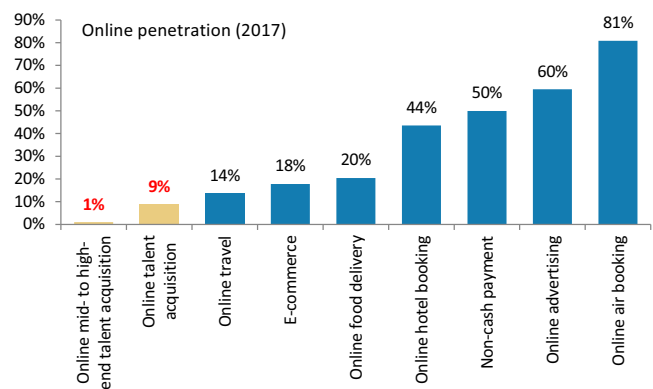
Source: iResearch, CIC, Hroot, Euromonitor, eMarkter, Morgan Stanley Research

Exhibit 23: Rising budget allocated to online channels
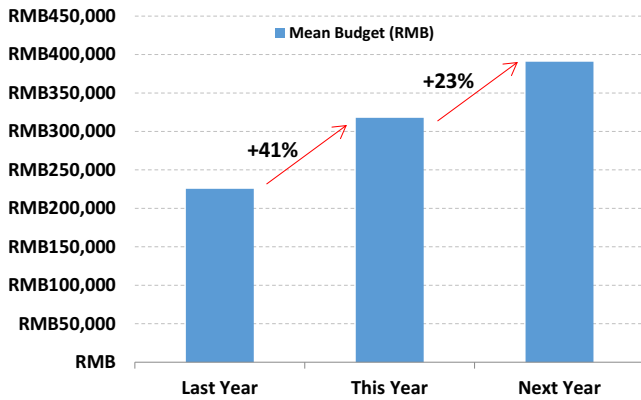
Source: AlphaWise, Morgan Stanley Research, as of 1H17.

Exhibit 24: Companies allocate budgets across multiple platforms

% Budget Allocated Per Platform By Budget Size
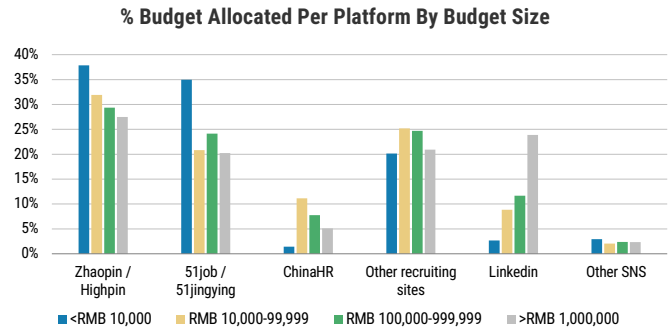
Source: AlphaWise, Morgan Stanley Research, as of 1H17.

B. China's transition to high income status creates more jobs in the service/higher income segments

Jobs growth in the service sector is the fastest as China transitions towards higher income status. Average employment in China's tertiary industries increased at a 4.7% CAGR over 2013-17, stronger than the 1.3% CAGR decline for secondary industries and 4.1% CAGR decline for primary industries. Close to 40% of Liepin's customers are from the financial services and internet industries.

According to CIC, the number of urban employees in the mid- to high-end segment (annual salary above Rmb100,000) rose from 52mn in 2013 (13% of total) to 77mn in 2017 (18% of total) and will rise further to 125mn in 2020 (26% of total).

Exhibit 25: Rising service sector in China

Annual Average Employment Growth
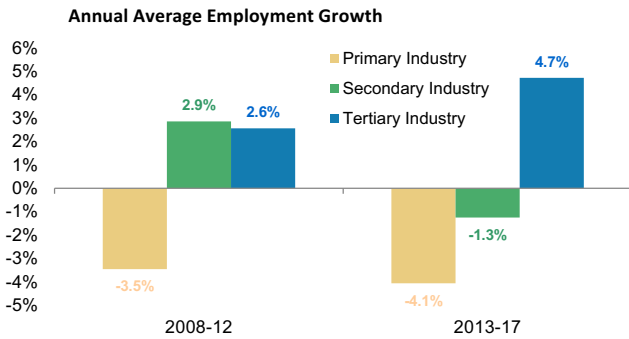
Source: CEIC, Morgan Stanley Research.

Exhibit 26: Mix of mid- to high-end urban employees (annual salary above Rmb100,000) reaching 26% in 2022

Number of urban employees (mn)

Source: CIC, Morgan Stanley Research

13
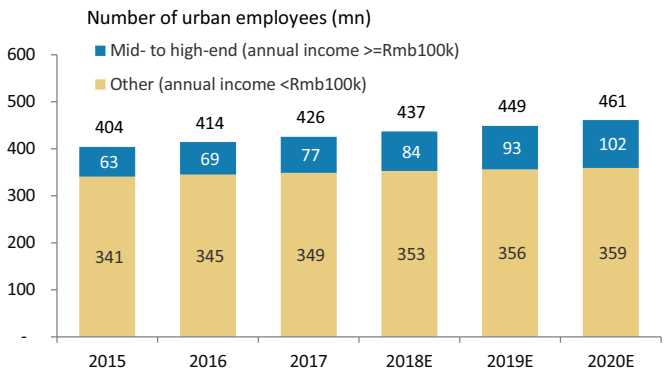
3. FCF CAGR of 68% over 2017-20 and potential M&A

A. Sales efficiency and minimal industry cannibalization risk drive positive operating leverage

We expect operating margin to expand from 3% in 2017 to 27% in 2020 (2015: -69%), mainly driven by a revenue CAGR of 44% over the same period (CAGR of 54% over 2015-17), and positive operating leverage coming from sales and marketing expenses. The company has achieved an incremental sales revenue/sales and marketing dollar ratio of 3.1 in 2016 and 2.7 in 2017, and we expect it to improve to 3.2-3.9 over 2018-20, driven by increasing revenue and user renewal rates.

Exhibit 27: Talent acquisition revenue and sales and marketing dollar spending (staff costs)

Rmb mn	FY15	FY16	FY17	FY18E	FY19E	FY20E
Talent acquisition revenue	**336**	**579**	**796**	**1,151**	**1,605**	**2,165**
Change in revenue		*242*	*217*	*355*	*453*	*560*
Sales and marketing expenses	**408**	**482**	**487**	**646**	**776**	**925**
Staff costs	214	292	373	486	611	755
Change in staff costs		*78*	*81*	*113*	*125*	*144*
Others	194	190	114	161	165	170
Ratio of change in revenue to change in staff cost		**3.1**	**2.7**	**3.2**	**3.6**	**3.9**
No of sales staff	976	1,314	1,323	1,548	1,765	1,994
No of business customer (000)	20.1	31.0	39.9	52.2	66.4	82.3
No of customer per sales staff	**21**	**24**	**30**	**34**	**38**	**41**

Source: Company data, Morgan Stanley Research estimates

Exhibit 28: Revenue growth of Liepin faster than global and local peers
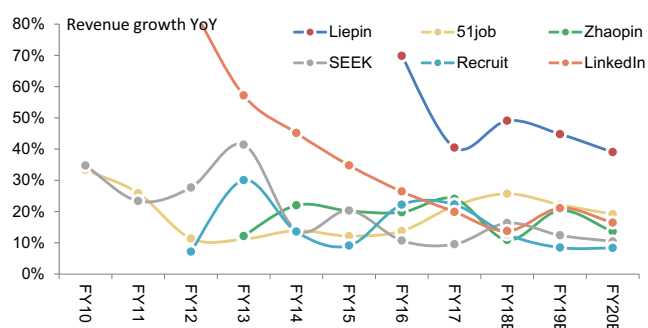
Source: Company data, Morgan Stanley Research estimates, except that consensus data is used for 51job

Exhibit 29: Operating margin expansion from 3% in 2017 to 27% in 2020
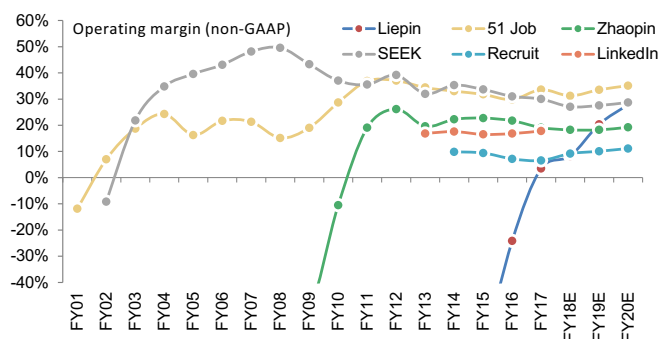
Source: Company data, Morgan Stanley Research (E) estimates, except that consensus data is used for 51job.

B. Positive cash flow partly due to upfront payments

Operating cash flows turned positive in 2017 at Rmb191mn, driven by upfront payments from both business and individual customers. We expect free cash flow to increase at a 68% CAGR, 2017-20, faster than revenue growth.

C. Potential M&A

The company says that it plans to selectively pursue acquisitions or investments in complementary assets and businesses over 2018-20. While the company has not commented on specifics, given its development strategy we believe Liepin will focus investment on more technologically advanced assets (e.g., SaaS solutions). Recent acquisitions include:

1. In December 2017, it acquired 51% of CGL Consulting, which focuses on providing high-end executive search services, for Rmb25mn.

2. On December 31, 2017, Liepin acquired a 10% stake in Unicareer for Rmb19mn. Unicareer is mainly engaged in the provision of career development and training services for fresh graduates and university students through the use of an online recruitment platform.

3. In 1H18, Liepin acquired a 14.6% stake in MoSeeker for US$10mn. MoSeeker is mainly engaged in the development of recruitment platforms and provision of social recruitment services through the use of social media and mobile communications channels.

Exhibit 30: Strong operating cash flows
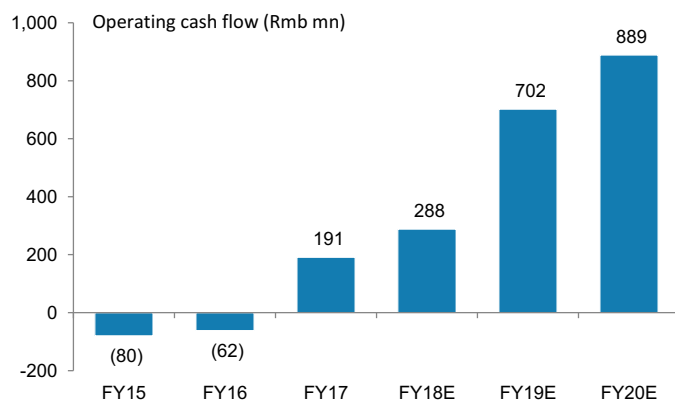
Source: Company data, Morgan Stanley Research (E) estimates.

Exhibit 31: Total cash and cash equivalents (including investments in deposits and wealth management products)
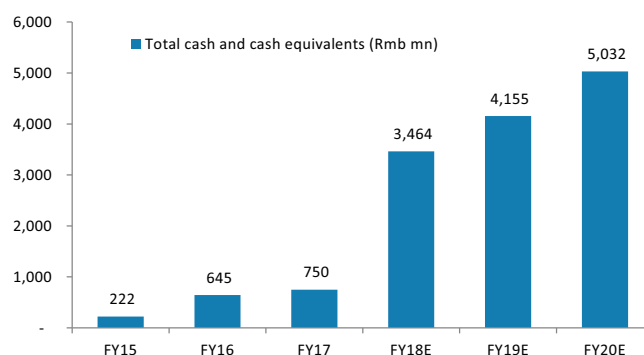
Source: Company data, Morgan Stanley Research estimates

Investment Concerns

Our key concern is intensifying competition as peers, which have user bases triple the size of Liepin, invest more in technology and penetrate up the value chain. Thus, the company will need to maintain investments in R&D and sales staff to improve products and grow the scale of its data base. Since Liepin targets only the mid- to high-end segment of the talent acquisition market, it may not benefit from the same economies of scale and operating leverage that peers have. Also, to achieve our operating margin forecast of 27% in 2020, sales efficiency has to improve from 2017.

1. Intensifying competition

A. Peers which are more than triple the size of Liepin's individual user base could invest in tech and penetrate the mid- to high-end segment

Exhibit 32: Liepin is not the most commonly used platform

Online Recruiting Platforms Currently Used
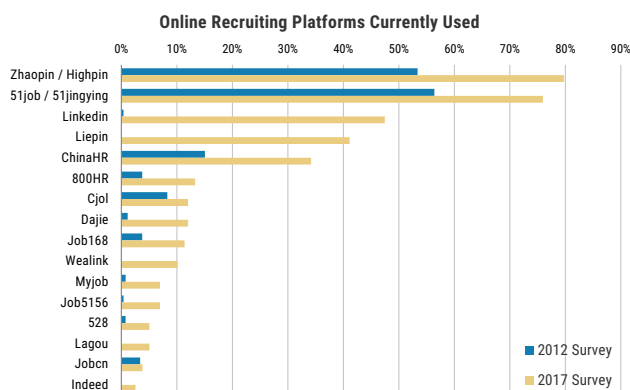
Source: AlphaWise, Morgan Stanley Research, as of 1H17.

Other online recruitment platforms could leverage technology from controlling/major shareholders (that possess strong global franchises and could be preferred by multinational companies, especially in the higher end segment) and big user databases to provide smarter talent acquisition services. These include LinkedIn (Microsoft), 51job (Recruit) and Zhaopin (SEEK).

M&A could drive speedier technology advancement for peers - There are a number of smart technology companies specialized in recruitment in China. If these merge or collaborate with the bigger players, they could threaten Liepin's competitive edge. 51job is the leading online recruitment platform in the white collar segment with the largest user data base and longest operating history (since 1999). It has thus built long-term business relationships with many major employers. 51job has been active in acquisitions in recent years, including Yingjiesheng, Zhiding Youyuan, and Lagou. It has over 110mn resumes, 20mn daily unique visitors, and 7mn daily job postings in 2017.

Exhibit 33: Previous corporate activities by 51job

Time	Target	Target Description	Amount	Equity stake	Valuation
Apr-15	Yingjiesheng	Online recruitment platform focused on college graduates and students in China	Rmb250mn	100%	Rmb250mn
Jun-15	Beijing Zhiding Youyuan	Provider of professional assessment services in China	Rmb18.7mn	60%	Rmb31mn
2015-17	Several long-term non-controlling investments that provide services of recruitment and HR services, recruitment process outsourcing, accounting and finance training courses		Rmb247.8mn		
Dec-17	Lagou	Online recruitment platform focused on technology and engineering talent in China	Rmb782.6mn	66%	Rmb1.3bn

Source: Company data, Morgan Stanley Research

Exhibit 34: Comparison of key online recruitment platforms for the white collar market

	Liepin	HunterOn	51job	Zhilian Zhaopin	LinkedIn China	Maimai	Lagou	Boss Zhipin
Year of establishment	2011	2012	1999	1997	2014	2013	2013	2012
Positioning	Headhunter-driven		Job board listing + offline HR services		Social network		Innovative recruitment platform	
Characteristics	1. Specialized in recruitment of mid- to high-end talents 2. Job and candidate recommendation to job seekers and employers respectively based on algorithm and big data 3. Headhunters providing closed-loop services 4. Strict profile verification requiring payment and ID numbers (Liepin)		1.Online job board (65% of revenue) 2. Offline HR related services, such as business process outsourcing, training, campus recruitment and placement services (print advertising was ceased in 2015)	1. Online job board (85% of revenue) 2. Offline HR related services, such as executive search, campus recruitment, training, print advertising, etc.	1. Build a community platform where users can share information and get updates about the industry and their friends		1. Specialized in recruitment of internet industry 2. Job recommendation to job seekers based on algorithm and big data 3. Offer human resource related services, such as HR SaaS, training	1. Enable direct messaging between job seekers and recruiters, thus eliminating reliance on headhunters
Monetization model	Freemium job listing model with value-addeds services charging Rmb10,000-40,000 per package per year, eg. Rmb30-40 per CV download, Rmb2,000-9,000 per interview arranged by headhunter	Third-party platform enabling enterprises to post job order with tailored pricing, and headhunters can bid the order to offer recruitment services up to onboarding. Annual ARPU is approximately Rmb30k.	Rmb800-1,000 for 20 job listings in one month	Freemium job listing model up to 10 job postings, then charge Rmb30 per job posting, Rmb30 per CV download and Rmb5 per refresh	Most revenue from business customers buying package for recruitment-related VAS, <10% of total revenue from advertising.	80% of revenue from advertising, 20% from membership fee, and <10% from recruitment-related services.	Freemium listing model with limited quota of job postings, then charge for value-added services such as priority listing.	

Source: Company data, Morgan Stanley Research estimates.

2. Margin Uncertainty

In our base case, we expect operating margin to expand from 3% in 2017 to 27% in 2020 driven by revenue CAGR of 44% over 2017-20 and increasing sales efficiency (Exhibit 27). However, apart from the intensifying competition mentioned earlier, margin may not achieve the ramp we expect for a few reasons.

A. Liepin has a smaller individual user base than peers

1. Liepin's individual user base of 40mn at the end of 2017 is less than a third of 51job's 123mn and Zhaopin's 140mn;

2. The number of job postings on Liepin at 2.5mn at the end of 2017 is fewer than Zhaopin's 37mn at end of June 2016;

3. Liepin Tongdao (Liepin's mobile app for individual users) MAU was 3.2mn, smaller than that of Zhilian Zhaopin of 9.7mn, Maimai of 8.6mn, 51job of 7.6mn and Boss Zhipin of 4.5mn in June 2018, according to QuestMobile.

Exhibit 35: Number of individual users
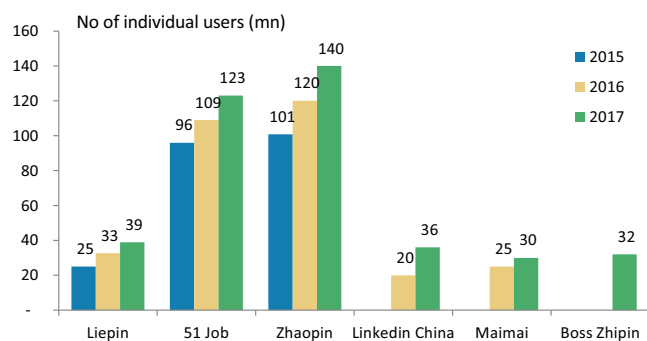
Source: Company Data, Morgan Stanley Research

Exhibit 36: Mobile MAU of job apps, June 2018
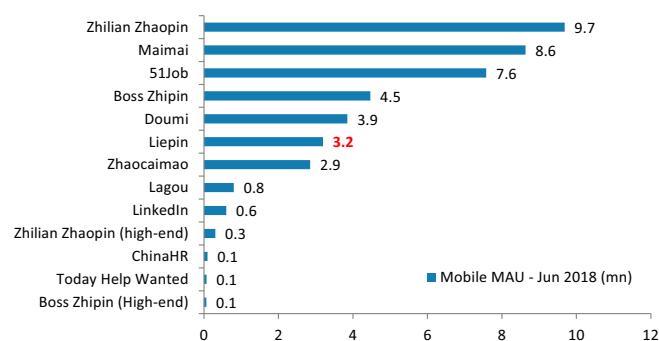
Source: QuestMobile, Morgan Stanley Research.

B. Peers have a bigger addressable market to achieve economies of scale

Exhibit 37: Liepin had a lower net addition of business customers than peers in 2016 and 2017

Net add of business customers (000)

- Business user growth in 2016
- Business user growth in 2017

	Liepin	51 Job	Zhaopin
2016	11	54	91
2017	9	58	103
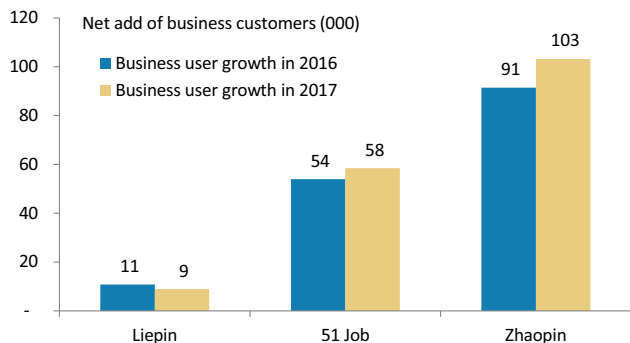
Source: Company Data, Morgan Stanley Research

Although Liepin has much higher annual ARPPU for business customers of Rmb20k in 2017, compared with 51job's and Zhaopin's Rmb3-4k, 51job and Zhaopin target the wider white collar segment, which should provide better economies of scale and operating leverage.

China has a total labor population of 902mn at the end of 2017 according to China's National Bureau of Statistics, including 426mn urban employees, of which only 77mn belong to the mid- to high-end segment according to CIC.

Liepin has added 11k and 9k business customers in 2016 and 2017 respectively, lower than 54-103k a year for 51job and Zhaopin.

C. Liepin has lower customer acquisition cost efficiency than 51job and Zhaopin

Liepin had higher sales and marketing expenses (excluding advertising) per business customer and advertising expenses per net addition of individual resume than 51job and Zhaopin in the last three years.

Exhibit 38: S&M excluding advertising per business customer

(Rmb) S&M excluding advertising expense per business customer

	Liepin	51job	Zhaopin
FY15	12,445	1,304	1,246
FY16	10,841	1,426	1,295
FY17	10,469	1,516	
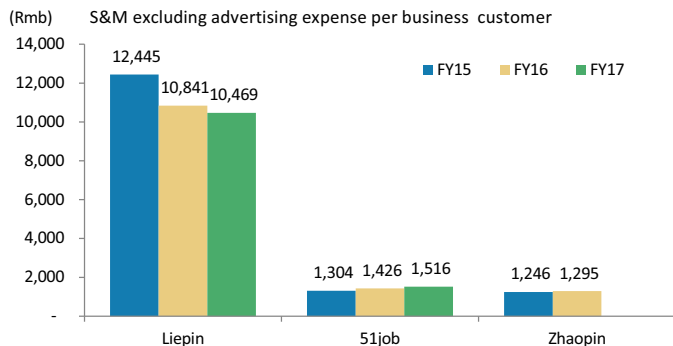
Source: Company data, Morgan Stanley Research

Exhibit 39: Advertising and promotion expense per net add of individual resume

(Rmb) Advertising exp per net add of individual resume

	Liepin	51job	Zhaopin
FY15		10.3	8.3
FY16	19.0	9.7	6.1
FY17	11.2	9.3	
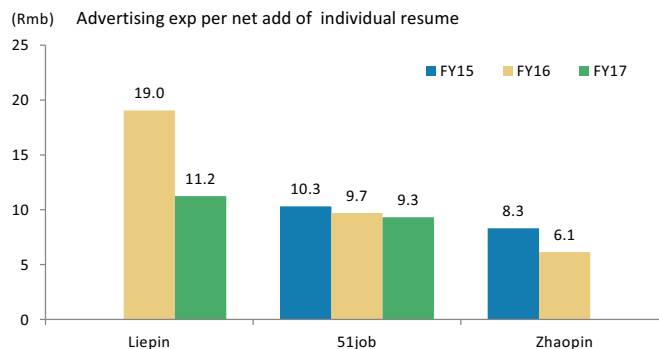
Source: Company data, Morgan Stanley Research

Exhibit 40: Comparison between Liepin, 51job, and SEEK

Rmn mn, unless stated	Liepin						51job					SEEK				
	FY15	FY16	FY17	FY18E	FY19E	FY20E	FY15	FY16	FY17	FY18E	FY19E	FY15	FY16	FY17	FY18E	FY19E
Income Statement																
Net revenue	**346**	**587**	**825**	**1,229**	**1,780**	**2,475**	**2,055**	**2,338**	**2,849**	**3,736**	**4,569**	**4,380**	**4,456**	**5,345**	**6,391**	**7,204**
Growth YoY		70%	40%	49%	45%	39%		14%	22%	31%	22%		2%	20%	20%	13%
China	346	587	825	1,229	1,780	2,475	2,055	2,338	2,849	3,736	4,569	1,271	1,523	1,890	2,096	2,521
Outside China	-	-	-	-	-	-	-	-	-	-	-	3,109	2,933	3,455	4,296	4,683
Gross profit	**296**	**496**	**693**	**1,025**	**1,456**	**2,016**	**1,485**	**1,675**	**2,085**	**2,765**	**3,381**					
Growth YoY		67%	40%	48%	42%	38%		13%	24%	33%	22%					
Gross margin	86%	85%	84%	83%	82%	81%	72%	72%	73%	74%	74%					
EBITDA (non-GAAP)	**(224)**	**(128)**	**45**	**118**	**377**	**705**	**648**	**675**	**934**	**1,339**	**1,709**	**1,790**	**1,719**	**1,930**	**2,200**	**2,488**
Growth YoY			NM	163%	221%	87%		4%	39%	43%	28%		-4%	12%	14%	13%
EBITDA margin	-65%	-22%	5%	10%	21%	28%	32%	29%	33%	36%	37%		39%	36%	34%	35%
China	(224)	(128)	45	118	377	705	648	675	934	1,339	1,709	289	307	326	382	460
Growth YoY			NM	163%	221%	87%		4%	39%	43%	28%		6%	6%	17%	20%
EBITDA margin	-65%	-22%	5%	10%	21%	28%	32%	29%	33%	36%	37%	23%	20%	17%	18%	18%
Outside China	-	-	-	-	-	-	-	-	-	-	-	1,501	1,412	1,603	1,817	2,028
EBITDA margin												48%	48%	46%	42%	43%
Operating profit (non-GAAP)	**(232)**	**(142)**	**29**	**101**	**362**	**691**	**654**	**698**	**957**	**1,205**	**1,556**	**1,474**	**1,383**	**1,604**	**1,714**	**1,967**
Growth YoY		NM	NM	248%	259%	91%		7%	37%	26%	29%		-6%	16%	7%	15%
Operating margin	-67%	-24%	4%	8%	20%	28%	32%	30%	34%	32%	34%		31%	30%	27%	27%
Net profit (non-GAAP)	**(222)**	**(128)**	**17**	**99**	**397**	**670**	**693**	**721**	**950**	**870**	**1,466**	**1,074**	**925**	**1,086**	**1,018**	**1,231**
Growth YoY		NM	NM	491%	303%	69%		4%	32%	-8%	69%		-14%	17%	-6%	21%
Net margin	-64%	-22%	2%	8%	22%	27%	34%	31%	33%	23%	32%		21%	20%	16%	17%
Key Operating Data																
Business users (,000) *	75	160	249	337	429	525	407	461	519			418	510	613	(Zhaopin)	
Business customers (,000) *	20	31	40	52	66	82	407	461	519			418	510	613	(Zhaopin)	
Individual users (mn) *	25	33	39	47	55	63	96	109	123			101	120	140	(Zhaopin)	
Annual ARPU (Rmb)	16,701	18,691	19,950	22,035	24,168	26,310	3,334	3,357	3,605			3,038	2,987	3,083	(Zhaopin)	
Sales and marketing expenses	408	482	487	646	776	925	654	783	918			615	778			
Advertising expenses	157	147	70	112	114	116	124	126	130			94	118			
S&M (excluding advertising)	251	336	418	535	663	809	531	657	787			521	660			
S&M (ex adv) per business customer	12,445	10,841	10,469	10,237	9,979	9,834	1,304	1,426	1,516			1,246	1,295			
Adv per net add of individual user		19.0	11.2	14.3	14.3	14.7		9.7	9.3				6.1			
Sales headcount			2,791	3,252	3,677	4,109	6,567	7,373	7,637							
Business customers per sales			14	16	18	20	62	62	68							

Source: Company data, Bloomberg consensus for non-covered stock 51job, Morgan Stanley Research estimates.

Valuation

We derive our price target of HK$38.0 from a discounted cash flow (DCF) model with a WACC of 14% and terminal growth of 3%. We use DCF because the company remains in a high-growth phase (44% revenue CAGR over 2017-20) and we anticipate material operating margin expansion from 3% in 2017 to 27% in 2020. Beyond 2020, operating margin should continue to expand to a steady state of almost 35%.

We think a valuation multiple based on 2020 forecasts is appropriate because the company just reached break even in 2017 and operating margin will not reach meaningfully above 20% until 2020. Our price target implies 2019 and 2020 P/Es of 42x and 25x on our non-GAAP base case EPS, respectively.

1. **Premium to local peers** - We think stronger revenue growth and better positioning in the mid- to high-end segment deserve a valuation premium over local peers. Our PT implied 2020 P/E of 25x is higher than 51job's 20x based on consensus 2020 EPS at the current price (51job has traded at an average of 22x since 2006 based on consensus forward EPS).

2. **Should not trade above global peers** - We think Liepin's valuation multiple should not be much higher than global peers due to its lack of scale and regional franchise. Our PT implied 2020 P/E of 25x is between SEEK's 25x (CY2020) (long-term average of 23x since 2006 based on consensus forward EPS) and Recruit Holdings' 28x (long-term average of 29x since 2014 based on consensus forward EPS), both based on Morgan Stanley estimates at the current price.

Macro risks

Risks to our implied valuation multiple - Chinese equity markets have been on a downward trend since valuations peaked in late January, coinciding with tighter liquidity conditions and rising trade tensions with the US, fund outflows, rising onshore and US interest rates and a weaker RMB. Our Asia/EM equity strategy team downgraded China to EW in June, citing these risks. These risks could remain as overhangs to reaching our price target implied P/E of 25x.

Risks to China macro economy affecting the recruitment market - If trade tensions escalate further, our China economists' 6.4% GDP growth estimate for China in 2019 faces significant downside risk, affecting recruitment demand. However, the positive thing is while Chinese GDP growth is moderating on softer public investment and shadow banking credit, growth quality is improving with stronger consumption and private capex.

Exhibit 41: 2020 P/E higher than local peer and but not global peers
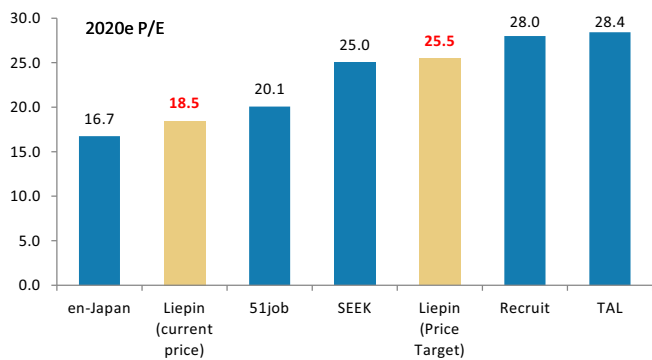
Source: Thomson Reuters, Morgan Stanley Research estimates. As of July 31, 2018.

Exhibit 42: 51job's forward P/E averaged 22x since 2006
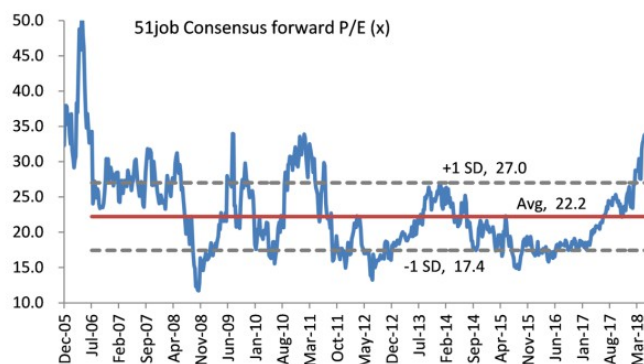
Source: Thomson Reuters, Morgan Stanley Research. As of July 31, 2018.

Exhibit 43: SEEK's forward P/E averaged 23x since 2006
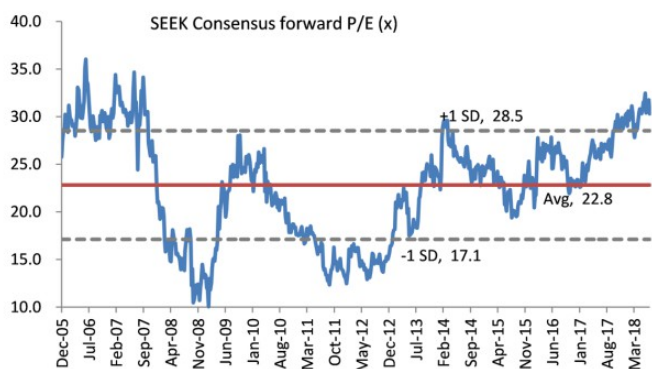
Source: Thomson Reuters, Morgan Stanley Research. As of July 31, 2018.

Exhibit 44: Recruit's forward P/E averaged 29x since 2014
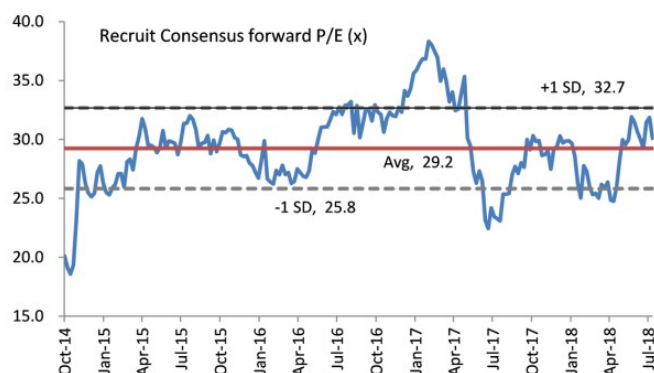
Source: Thomson Reuters, Morgan Stanley Research. As of July 31, 2018.

Exhibit 45: Discounted cash flow PT (end-2019) based on WACC of 14% and terminal growth of 3%

Rmb mn	FY17	FY18E	FY19E	FY20E	FY21E	FY22E	FY23E	FY24E	FY25E	FY26E	FY27E	FY28E
EBIT (non-GAAP)	29	101	362	691	915	1,124	1,330	1,472	1,636	1,818	2,020	2,243
Margin	3.5%	8.2%	20.4%	27.9%	30.2%	31.6%	33.0%	33.1%	33.5%	33.8%	34.1%	34.5%
Income tax	-	-	-	(86)	(165)	(202)	(239)	(265)	(295)	(327)	(364)	(404)
Tax rate	0.0%	0.0%	0.0%	12.5%	18.0%	18.0%	18.0%	18.0%	18.0%	18.0%	18.0%	18.0%
Depreciation and amortization	16	17	15	14	14	13	13	14	14	15	15	15
Margin	1.9%	1.4%	0.8%	0.6%	0.5%	0.4%	0.3%	0.3%	0.3%	0.3%	0.3%	0.2%
Capex	(6)	(16)	(11)	(12)	(13)	(14)	(14)	(14)	(15)	(15)	(16)	(16)
As % of revenue	-0.7%	-1.3%	-0.6%	-0.5%	-0.4%	-0.4%	-0.3%	-0.3%	-0.3%	-0.3%	-0.3%	-0.3%
Change in working capital	124	173	290	204	194	198	151	167	121	148	136	151
As % of revenue	15.0%	14.1%	16.3%	8.3%	6.4%	5.5%	3.8%	3.8%	2.5%	2.7%	2.3%	2.3%
Unlevered FCFF	**162**	**275**	**657**	**811**	**946**	**1,119**	**1,240**	**1,373**	**1,462**	**1,638**	**1,792**	**1,989**
As % of revenue	19.7%	22.3%	36.9%	32.8%	31.2%	31.4%	30.8%	30.9%	29.9%	30.5%	30.3%	30.6%
Growth YoY		69.0%	139.1%	23.5%	16.6%	18.3%	10.9%	10.7%	6.5%	12.0%	9.4%	11.0%
Terminal value			5,727	6,529	7,443	8,485	9,673	11,027	12,571	14,331	16,337	18,624
Proportion of cash flows	0.0%	0.0%	0.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Time factor		-	-	0.50	1.50	2.50	3.50	4.49	5.51	6.51	7.51	8.48
Discount factor	1.00	1.00	1.00	0.94	0.82	0.72	0.63	0.56	0.49	0.43	0.37	0.33
Enterprise value		12,749	12,749	13,671	14,571	15,413	16,242	17,051	17,872	18,619	19,306	18,624
Net cash		3,309	4,001	4,877	5,902	7,122	8,483	9,996	11,619	13,440	15,440	17,663
Equity value		16,059	16,750	18,548	20,473	22,535	24,725	27,047	29,491	32,060	34,746	36,287
No of diluted share		525	535	546	557	568	580	591	603	615	627	640
Equity value per share (Rmb)		30.6	31.3	34.0	36.8	39.7	42.7	45.8	48.9	52.1	55.4	56.7
Price Target (HK$)			38.0	42.0	46.0	49.0	53.0	57.0	61.0	65.0	69.0	70.0
FX (CNY/HKD)		1.18	1.21	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
Price Target Date			31-Dec-19									
WACC			14.0%									
Terminal growth			3.0%									

Source: Company data, Morgan Stanley Research estimates.

Exhibit 46: DCF assumptions for peers under our coverage

Company	Methodology	WACC	Terminal growth
Tencent	DCF	10.0%	3.0%
Alibaba	DCF	11.0%	5.0%
Weibo	DCF	11.0%	3.0%
China Literature	DCF	11.0%	3.0%
JD.com	DCF	12.0%	4.0%
Ctrip	DCF	12.0%	3.0%
Wise Talent	DCF	14.0%	3.0%
Bilibili	DCF	14.0%	3.0%
Autohome	DCF	16.0%	4.0%
Qudian	DDM	18.0%	3.0%

Source: Morgan Stanley Research estimates

Bull case - Valued as a SaaS company, driven by its human resources management solutions

Our bull case value of HK$54 is driven by a 54% revenue CAGR over 2017-20, powered by 36% growth in the number of business customers, with non-GAAP operating margin reaching 35% in 2020. This represents faster online penetration, market share gains and better sales efficiency versus the base case.

We also see potential for the stock to re-rate by using the SaaS company argument, given that: 1) the company consistently offers new product solutions to business customers and headhunters (e.g. Interview Express in 2015 and Onboarding Express in 2016) and keeps research and development expenses in line with revenue growth, 2) 86% revenue renewal rate in 2017, 3) gross margin of over 80%, 4) a high LTV-to-CAC (life time value to customer acquisition cost) ratio of 7.2x in 2017, and 5) a PEG ratio of 0.7x in 2018 (based on 2017-20 EPS CAGR). Our bull case value implies ~7x EV/Sales on our 2020 base case forecast.

Exhibit 47: SaaS valuation comparison

Company		Ticker	EV (US$ mn)	EV/Sales 2018E	EV/Sales 2019E	EV/Sales 2020E	Sales CAGR 2017-20E	EBITDAM 2020E
Web Hosting, Infrastructure and Service Providers								
Endurance		EIGI-US	2,987	2.6	2.6	2.5	0%	35%
GoDaddy		GDDY-US	14,368	5.5	5.0	4.5	13%	27%
United Internet AG	NC	UTDI-XE	13,414	2.2	2.1	2.0	9%	25%
Akamai Technologies		AKAM-US	12,798	4.7	4.4	4.0	8%	36%
Box		BOX-US	3,210	5.4	4.5	3.9	18%	-7%
Wix.com	NC	WIX-US	4,311	7.2	5.7	4.6	30%	18%
Average				*4.6*	*4.0*	*3.6*	*13%*	*22%*
SMB Service Providers								
Intuit		INTU-US	51,344	8.3	7.4	7.1	10%	37%
Yelp		YELP-US	2,297	2.4	2.1	1.8	14%	12%
Shopify		SHOP-US	14,669	13.9	9.7	7.2	44%	-3%
Average				*8.2*	*6.4*	*5.4*	*23%*	*15%*
Liepin (base)		**6100-HK**	**1,941**	**10.4**	**7.0**	**4.9**	**44%**	**28%**
Liepin (bull)		**6100-HK**	**2,997**	**15.0**	**9.7**	**6.5**	**54%**	**35%**

Source: Morgan Stanley Research estimates, Thomson Reuters consensus for non-covered companies (NC). As of July 31, 2018.

Bear case - Slower revenue and margin growth due to weaker China economy and poor sales efficiency

Our bear case value of HK$20 results from weaker recruitment demand due to slower China economic growth, poor sales efficiency and thus lower revenue and margin growth. We assume total revenue will expand at a 34% CAGR over 2017-20 (base case: +44% CAGR), driven by 19% growth in the number of business customers, while non-GAAP operating margin will reach 16% in 2020.

Appendix I - Company Background

The company started its businesses in 2011 with the launch of "liepin.com," providing job seekers with a variety of tools to match their qualifications with career opportunities, and to connect them with headhunters and employers. The company also offers customized talent acquisition services to business customers that allows it to acquire specific talent in an efficient and results-driven manner by leveraging technology and headhunters.

Exhibit 48: Company Milestones

Year	Milestone
2011	Online business commenced and "liepin.com" website was launched
2014	Launched Liepin Tongdao, a mobile app which connects professionals, headhunters and human resources managers
2015	Launched Interview Express, the first headhunter-assisted closed-loop product across China
2016	Launched Onboarding Express, a headhunter-assisted closed-loop product for the entire hiring process up to candidates' successful onboarding
2017	Launched 360-degree CV review and downloading services
	Launched CV advisory services to registered individual users

Source: Company data, Morgan Stanley Research

Liepin's ecosystem is composed of three key participants: 1) individual users, 2) business users, and 3) headhunters. As of December 31, 2017, the platform has 38.9mn registered individual users (about 25% of them are in Beijing, Shanghai, Guangzhou and Shenzhen), 248,600 verified business users (40k are paying customers), and 101,840 verified headhunters. The company had a sales and supporting team of 2,196 spanning 15 cities across China, including Beijing, Shanghai, Guangzhou, Shenzhen, Nanjing, Hangzhou, Dalian, Tianjin (Liepin's Global Career Development Center), Chengdu, Wuhan, Zhengzhou, Xiamen, Chongqing, Qingdao and Yunnan.

Exhibit 49: HunterOn's headhunting service trading platform

Source: iResearch

Exhibit 50: Liepin's talent search channel and headhunting services

Source: iResearch

Business users

User base: Business customers accounted for 96% of total revenue in 2017. According to NBS, China had a total of 14.6mn SMEs in 2016 that has increased at a 14% CAGR since 2010. In 2017, internet and financial services industries contributed close to 40% of the company's revenue from business customers, and the company serves more than 221 Fortune 500 companies across China. As of December 31, 2017, 74.7% of job postings published by its business customers had an average offered annual salary of at least Rmb100,000.

Product and service offerings: The company provides business customers both basic subscription-based and more advanced transaction-based, headhunter-assisted, and closed-loop talent acquisition services via Liepintong, an online recruitment solution powered by proprietary algorithms and a premium database that improves job-matching results. In particular, the company pioneered headhunter-assisted closed-loop talent acquisition services in China – *Interview Express* in 2015 and *Onboarding Express* in 2016.

1. *Interview Express* uses AI to recommend the most suitable headhunters to business customers based on their relevant expertise, recruiting track record and user feedback. Typically, the recommended headhunter will initiate conversations with a business customer within two working hours after *Interview Express* is initiated and recommend relevant CVs within 24 working hours. As of December 31, 2017, 40,575 business customers have used Interview Express to hire for over 210,000 positions via Liepin.

2. *Onboarding Express* helps business customers navigate the entire hiring process, from recommending CVs to scheduling interviews, and from negotiating offers to facilitating the onboarding process. Business customers pay for the services at a fixed rate based on the offered annual salary of a particular job upon occurrence of job interviews or the candidates' successful onboarding.

Value proposition for business users: The company has transformed the traditional talent acquisition approach as it leverages AI and data technologies to deliver more personalized and accurate candidate matching and recommendation results. Not only does the platform enable business customers to identify and acquire both active job seekers and suitable passive candidates in a cost-effective and results-driven manner, but it also creates a trusted transaction platform for them to reach a large base of talent and headhunters and to obtain one-stop and closed-loop services.

Exhibit 51: Key products and services

Key products and services	Charge	Users as of December 31, 2017
For registered individual users		38.9mn
Professional profile	Free	
Job and headhunter recommendation	Free	
Professional social network and career content	Free	
Premium membership	Range from Rmb130-450 per month	89.6mn
CV advisory	Typically Rmb500-1,500 per consultation	
For verified business users		
Subscription-based Services	*Typically Rmb10,000-40,000 per package which generally lasts for 12 months*	*39.9k*
Job posting	Free	
CV search, recommendation and management	Free	
HR internal synergy tools	Free	
Enterprise station	Free	
360-degree CV	Typically Rmb20-100 per CV	
Intent communication with job candidates	Typically Rmb200 per job candidate upon confirmation results	
Invitations to apply for jobs	Typically Rmb500 per job candidate upon sending invitation to AI-matched job candidates	
Express Hiring 2.0 (急聘2.0)	Typically Rmb500 per job posting	
Salary reports	Typically Rmb3,000 per city and industry on a quarterly basis	
Transaction-based Services		*Majority*
Interview Express (面試快)	At fixed rates ranging from Rmb2,000-9,000 upon occurrence of job interviews based on the offered annual salary of the position	40.6k
Onboarding Express (入職快)	At fixed rates ranging from Rmb15,000-80,000 upon candidates' successful onboarding based on the offered annual salary of the position	
Headhunter direct recommendations	Free for requesting headhunters to provide CV recommendations, and pay to download CV	
Background checks	At fixed rates typically ranging from Rmb78-1,088	
Recruiting process outsourcing ("RPO")	At fixed rates typically ranging from Rmb1,000-2,000 per position or at certain percentage of the offered salary of the position	
For verified headhunters		
Job posting	Free	
CV recommendations	Free	
CV downloading and management	Free	
Headhunter-assisted, closed-loop services	Free	

Source: Company data, Morgan Stanley Research. Note: number of individual users for premium membership and number of business customers who have used Interview Express are cumulative.

Individual users

User base: The company's individual user base primarily consists of mid- to high-end professionals, most of whom have received a bachelor's or higher degree, have over three years of working experience, or an annual salary of over Rmb100,000.

Product and service offerings: Via the liepin.com website, mobile app Liepin Tongdao, and branded WeChat official account, the company offers a diverse range of online talent services for free, including professional profiles, AI-assisted job recommendations, as well as professional social network and career content services. The platform also generates a small portion of revenue from fee-based professional career services to individual paying users, such as premium membership and CV advisory services.

Value propositions to individual users: The platform enables registered individual users to create and maintain a comprehensive, up-to-date, and modularized professional network profile that can be enhanced by mutual endorsement and verification. The accuracy, credibility and comprehensiveness of their talent graph increases the awareness of their professional identities and the opportunities to be identified by business users and headhunters, thus increasing the engagement level between ecosystem participants. As of December 31, 2017, 47.5% of individual users have updated their profiles at least once during the past 18 months.

Headhunters

User base: Liepin has 101,840 verified headhunters as of December 31, 2017, accounting for 29% of total headhunters in China, according to CIC.

Product and service offerings: The company provides headhunters with a free online recruitment solution, Chenglietong, to source candidates and manage their headhunting process more effectively. Headhunters can access the talent pool to search and browse individual user profiles without contact information for free. This mechanism helps incentivize headhunters to provide high-quality customized hiring services to both business and individual users.

Value proposition for headhunters: According to CIC, the traditional offline headhunter and talent acquisition services industry in China is highly fragmented, thus headhunters can leverage Liepin's well-recognized brand to reach a broader user base. Furthermore, Chenglietong enables both professional recruiting firms and individual headhunters to streamline and optimize their internal management via a one-stop online platform. A professional recruiting firm can register several individual headhunters under its account, allocate its virtual currency among each individual headhunter, and can then review and evaluate the performance of each individual headhunter.

Appendix II - Industry Overview

Human resources market

According to CIC, China's human resources market comprises three segments: 1) talent acquisition services, 2) human resources outsourcing services, and 3) other human resource services.

CIC projects that the overall human resources market will increase at a 19% CAGR, from Rmb343bn in 2017 to Rmb583bn in 2020. The fast growth is driven by increasing demand and rising business budgets for high-quality talent, as well as increasing willingness to spend more on high-quality customized services. In particular, businesses in fast-growing private sectors, such as technology and financial services, have increasing demand for high-quality talent in order to compete more effectively, according to CIC.

Exhibit 52: Human resources market in China to grow at a 3-year CAGR of 19%, to reach Rmb583bn in 2020
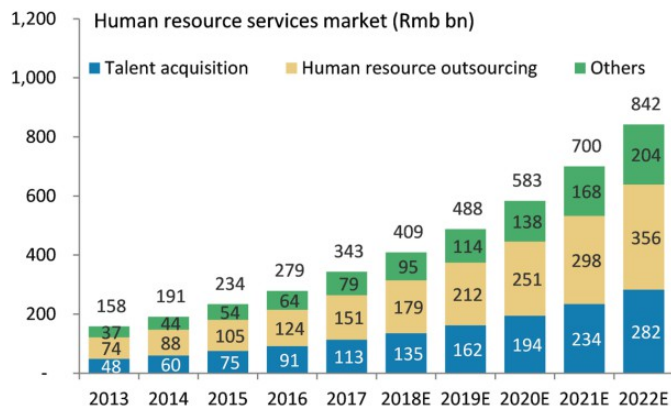
Source: CIC

Exhibit 53: Demand for high-quality talent has been increasing in China
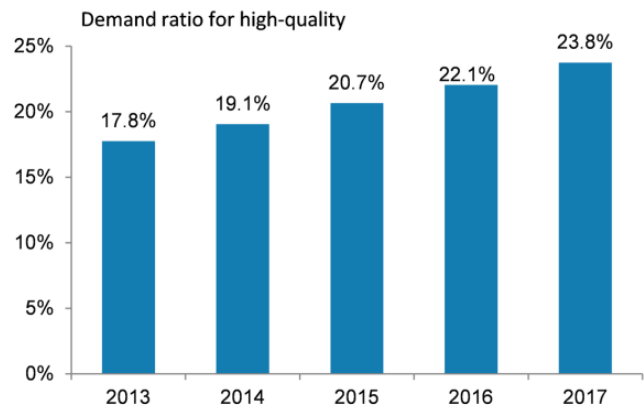
Source: CIC. Note: Demand ratio for high-quality talent equals the quotient of the total demand for high-quality talent divided by the total demand for talent. High-quality talent refers to job positions with an annual salary of at least Rmb100,000.

Talent acquisition services market

Talent acquisition services refer to solutions addressing businesses' hiring demands, such as headhunting and executive search, recruitment process outsourcing (RPO), online recruitment-related services, and campus recruitment, according to CIC. Headhunting and executive search involves a multistep process, in which a professional service provider is hired by a business customer to identify and recruit potential job candidates.

Exhibit 54: China's executive search companies

Source: iResearch

Exhibit 55: China's high-end headhunting companies

Source: iResearch

Talent acquisition services accounted for 25% of the total HR market in 2017. The talent acquisition services market can be further divided into: 1) a mid- to high-end segment (annual income of at least Rmb100,000); and 2) an entry-level segment (annual income of less than Rmb100,000), according to CIC. The company primarily operates in the midrange to high-end talent acquisition services segment, which had revenues of Rmb97bn in 2017, accounting for 85% of the talent acquisition services market, and it is expected to grow at a 20% CAGR, to Rmb167bn in 2020, according to CIC.

Driven by talent upgrade and increasing demand for mid- to high-end talent, the total population of mid- to high-end talent in urban areas should grow from 77mn in 2017 to 102mn in 2020, according to CIC, representing a 10% CAGR.

Exhibit 56: Talent acquisition services market in China to increase at a 3-year CAGR of 20% to reach Rmb167bn in 2020
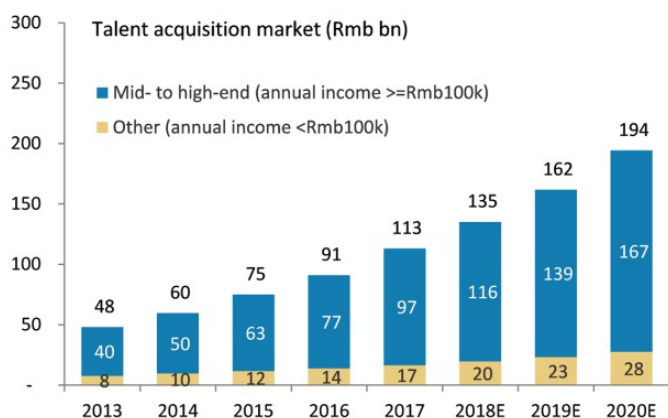
Source: CIC, Morgan Stanley Research. E=CIC estimates.

Exhibit 57: Number of mid- to high-end urban employees to increase at a 3-year CAGR of 10%, to 102mn in 2020
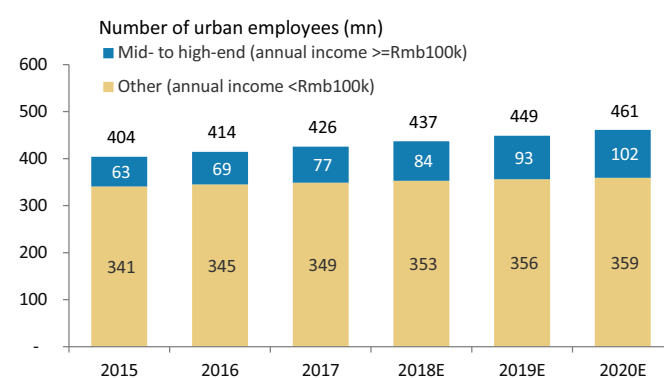
Source: CIC, Morgan Stanley Research. E=CIC estimates.

Exhibit 58: Network effects created by headhunting services
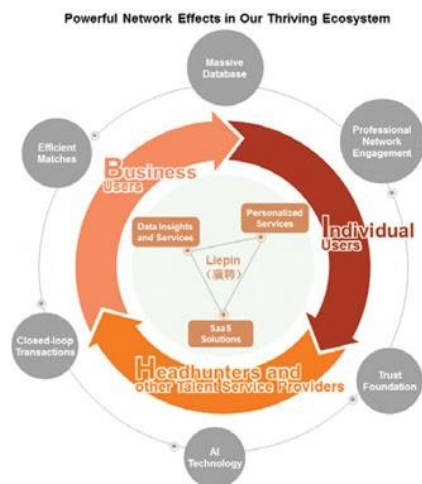
Source: Company data.

According to CIC, this mid- to high-end market has long been underserved by traditional recruiting firms, as such talent is primarily midlevel managers and executives with several years of experience, and they are generally passive job seekers. Although these passive job seekers currently enjoy stable and well-paid positions, they do not refuse to connect to more attractive career opportunities. Thus, they do not actively visit traditional online job boards but do tend to maintain a comprehensive and dynamic professional profile on a professional social network to keep connected to high-quality career opportunities. The emergence and popularity of online social networking has been fostering a more engaging and interactive professional culture among individual users, headhunters and business users in China. In addition, we believe technology has been reshaping the talent acquisition services market, in which AI and big data analytics can be used to help talent acquisition service providers deliver more accurate and efficient matching results and offer more personalized solutions to business customers.

Professional career services market

The professional career services market refers to solutions offered to individual users in order to help facilitate their career development and advancement, according to CIC. The services include career coaching, CV advisory services, professional skills training, and other related career services. Currently, the company is expanding its service offerings to more individual users by leveraging its large and high-quality talent base.

We note the market is currently underserved due to limited offline service providers. CIC forecasts that the professional career services market will grow at a 34% revenue CAGR, from Rmb47bn in 2017 to Rmb201bn in 2022, primarily driven by increasing demand for career development of high-quality talent, growing disposable income, and personal consumption upgrades.

Other industry tailwinds include:

Labor shortage in China – The labor demand-supply ratio, which tends to lead wage growth by two quarters, is at an all-time high of 123%, indicating the job market is at its tightest level in years. Our China economists expect wage growth to remain resilient.

More severe talent shortage in the technology sector – According to a LinkedIn survey, there are about 1.9mn AI engineers worldwide, but only 50,000 reside in China. As China's technology sector is expanding quickly, and is the home to the highest number of unicorns globally, we anticipate potential for a more severe labor shortage in the technology industry in China. The number of China-based AI job postings on LinkedIn surged more than eight times over the past three years, from about 50,000 in 2014 to 440,000 in 2016. China's demand for AI professionals may surge to 5 million in a few years, as reported by People's Daily (July 14, 2017). According to IDG Capital's 2017 Internet Unicorn Salary Report, compensation for top AI talent is 55% above average for information and communication technology (ICT) industry employee salaries. As of December 31, 2017, Liepin's business customers included 221 Fortune 500 companies, and nearly 40% of total revenue was derived from business customers that are companies in the fast-growing internet and financial industries.

Exhibit 59: All-time high labor demand-supply ratio (leading indicator) to drive income growth in China
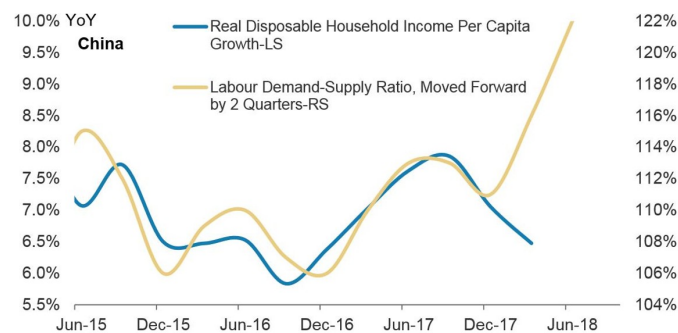
Source: NBS, CEIC, Morgan Stanley Research.

Exhibit 60: Higher demand for talent than supply in China
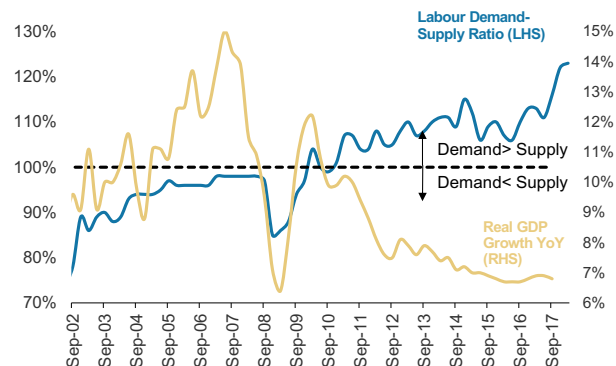
Source: NBS, CEIC, Morgan Stanley Research.

Exhibit 61: Employees in China switch jobs more frequently than those in the US

Number of months that employees staying in the same job post before switching jobs
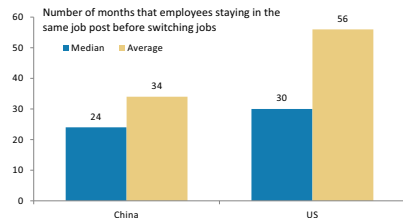
Source: LinkedIn 2015 Report.

Market consolidation – Currently, Liepin only has 0.85% revenue market share of talent acquisition services in China, and the top 10 service providers only accounted for 2.9% share by revenue in 2017. This industry has historically seen a significant amount of M&A, and we expect this to continue, resulting in better services to capture more demand in the market

Higher job switching frequency in China – Job seekers in China, on average, switch jobs after spending 34 months in a post, which is 22 months shorter than the US level, according to a report published by LinkedIn in 2015. Also, job switchers tend to enjoy a higher pay rise in the US than people who remain in their jobs, according to Federal Reserve Bank of Atlanta data. Thus, such dynamics should benefit Liepin's transaction volume and ARPPU, in our view.

Appendix III - Financial Forecasts

We forecast a 44% revenue CAGR, from Rmb0.8bn in 2017 to Rmb2.5bn in 2020. We expect positive operating leverage to drive operating margin expansion from 3% in 2017 to 27% in 2020. This will drive net profit to increase from Rmb9mn in 2017 to Rmb621mn in 2020, we estimate.

Exhibit 62: Revenue to grow at a CAGR of 44%, 2017-20E
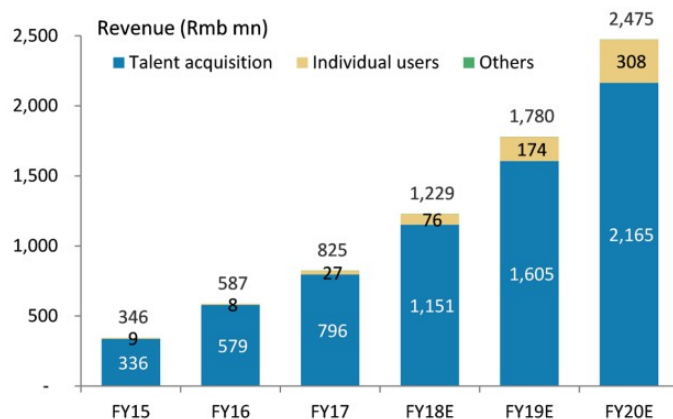
Source: Company data, Morgan Stanley Research (E) estimates.

Exhibit 63: Operating margin expansion from 2015 to 2020
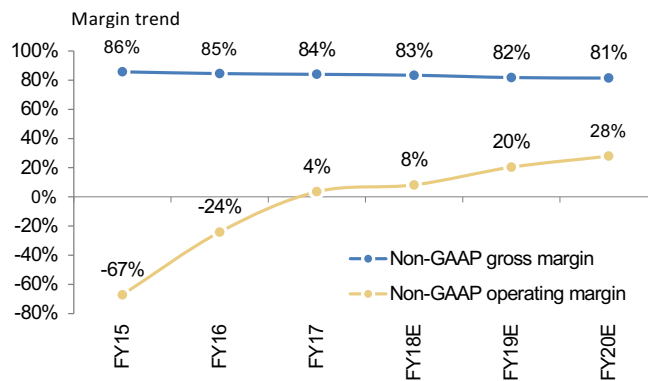
Source: Company data, Morgan Stanley Research (E) estimates.

1. Revenue growth

A. Talent acquisition services

We expect revenue from business customers to grow at a 40% CAGR, from Rmb0.8bn in 2017 to Rmb2.2bn in 2020, contributing 96% of revenue in 2017, and we expect it to remain the major revenue driver, contributing 87% of revenue in 2020. We expect the segment's growth to be driven by growth in: 1) paying users, and 2) ARPPU.

Paying users: We forecast the number of business paying users to increase at a CAGR of 27%, from 39.9k in 2017 to 82.3k in 2020, primarily driven by rising hiring demand and Liepin's competitive product. We expect the paying ratio to remain stable at 15-16% over 2018-20 (vs. 2017: 16.0%), as a result of expansion in the number of business users, from 248.6k in 2017 to 524.6k in 2020 (28% CAGR).

ARPPU: We also forecast that the segment's annual ARPPU will grow at a CAGR of 10%, from Rmb20k in 2017 to Rmb26k in 2020, thanks to cross-selling into transaction-based products, such as Interview Express and Onboarding Express, which have higher ARPPU.

Exhibit 64: Business customers and paying ratio
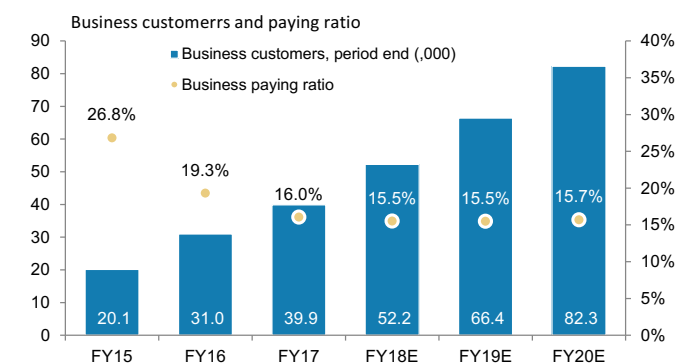
Source: Company data, Morgan Stanley Research (E) estimates.

Exhibit 65: Average revenue per business paying user
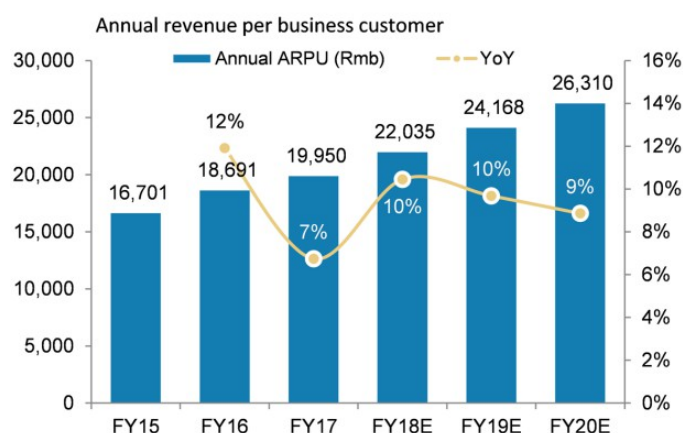
Source: Company data, Morgan Stanley Research (E) estimates.

B. Individual users

Revenue from individual customers contributed only 3% of total revenue in 2017, but we expect revenue to grow at a CAGR of 124%, from Rmb27mn in 2017 to Rmb308mn in 2020, accounting for 12% of total revenue in 2020. We expect the segment's growth to be driven by growth in: 1) paying users, and 2) ARPPU.

Paying users: We expect the number of individual users to grow at 17% CAGR, from 38.9mn in 2017 (representing 51% market share of China's mid- to high-end talent population of 76.6mn) to 62.5mn in 2020. The paying ratio has been low and flattish at 0.2% over 2015-17, but we expect it to reach 0.75% in 2020 driven by more and better products. Thus we expect the number of individual paying users to increase at 74% CAGR, from 89.6k in 2017 to 471.5k in 2020. However, most online recruitment platforms are free for individual users, thus Liepin's monthly fee of Rmb408 (July 2018) may weigh on the paying ratio and paying user growth, or advertising expenses could overshoot.

ARPPU: We forecast that the segment's implied annual ARPPU will grow at a CAGR of 29%, from Rmb304 in 2017 to Rmb653 in 2020. The growth is driven by an increase in adoption of CV advisory services (a relatively new product, launched in 2017), which charge Rmb500-1,500 per consultation, higher than the traditional product of premium membership fee of Rmb130-450 per month.

Exhibit 66: Pricing of subscription plan for individual users

Period	Fee (Rmb)	Monthly fee (Rmb)	Functions
Monthly	418	418	- Top placement of their professional profiles for 7 days - Group messaging to a number of headhunters or business HRs for 1 time - Top placement of CV when applying jobs for 3 times - One-on-one CV advisory service for 1 month
Quarterly (most popular)	700	175	- Top placement of their professional profiles for 21 days - Group messaging to a number of headhunters or business HRs for 2 times - Top placement of CV when applying jobs for 9 times - One-on-one CV advisory service for 3 months
Semi-annually	1,098	549	- Top placement of their professional profiles for 42 days - Group messaging to a number of headhunters or business HRs for 3 times - Top placement of CV when applying jobs for 18 times - One-on-one CV advisory service for 6 months
Annual	1,465	122	- Top placement of their professional profiles for 84 days - Group messaging to a number of headhunters or business HRs for 4 times - Top placement of CV when applying jobs for 36 times - One-on-one CV advisory service for 12 months

Source: Company mobile app as of July 23, 2018, Morgan Stanley Research.

Exhibit 67: Individual paying users and paying ratio
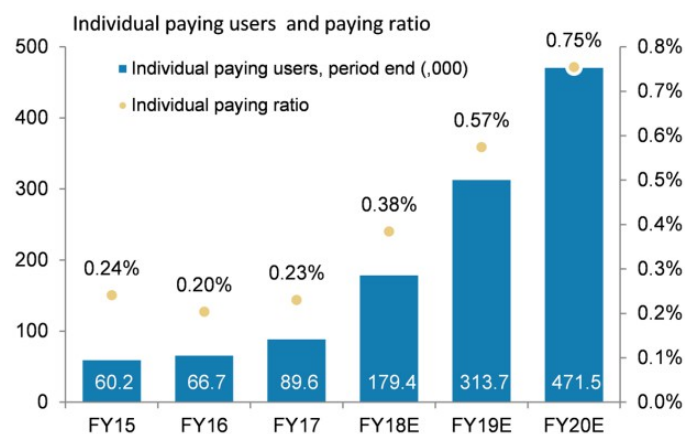
Source: Company data, Morgan Stanley Research (E) estimates.

Exhibit 68: Average revenue per individual paying user
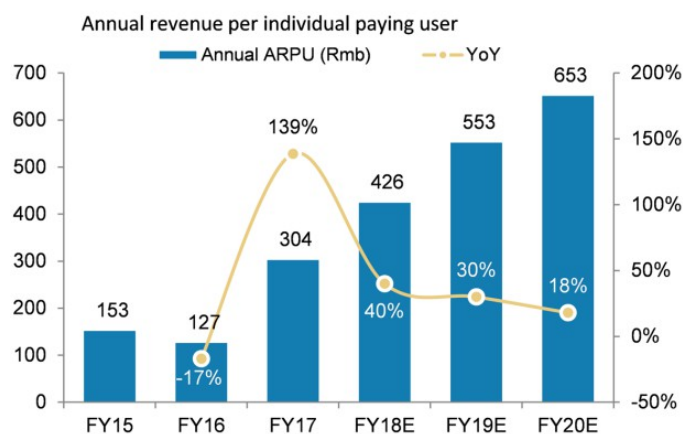
Source: Company data, Morgan Stanley Research (E) estimates.

2. Margin expansion

We expect the company to achieve significant margin expansion over 2018-20. We forecast that gross margin will remain stable, at ~81% by 2020, while non-GAAP operating margin increases from 4% in 2017 to 28% in 2020, thanks to operating leverage, as the company intends to keep revenue growth at roughly 2x that of operating expenses excluding research and development expenses.

Exhibit 69: Operating expenses as % of revenue
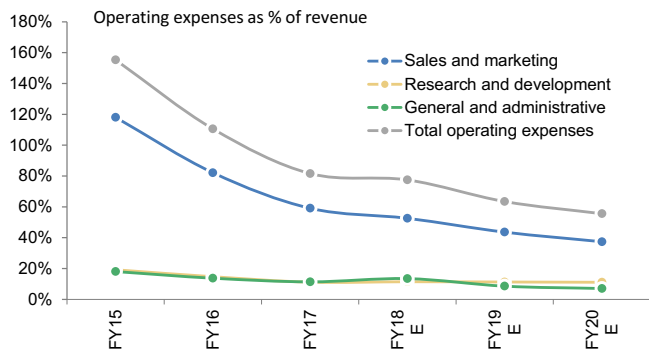
Source: Company data, Morgan Stanley Research (E) estimates.

Exhibit 70: Non-GAAP operating margin comparison with peers
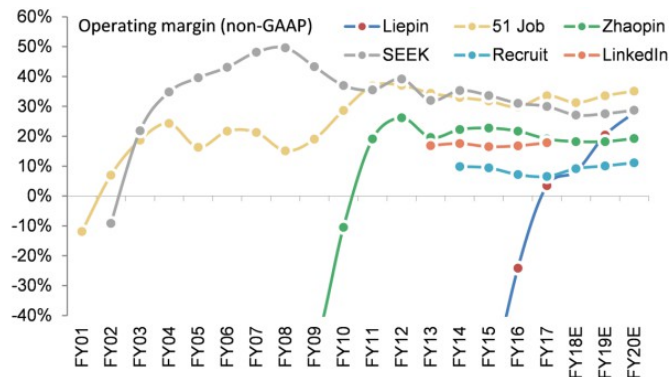
Source: Company data, Morgan Stanley Research (E) estimates.

A. Staff costs

Staff costs accounted for 67% of total costs (including cost of revenue and operating expenses) in 2017. As of December 31, 2017, the company has a headcount of 2,791, with 79% under the sales and support team. We expect a staff cost CAGR of 29% and staff count CAGR of 14% over 2017-20, similar to 28% staff cost CAGR over 2015-17.

B. Operating expenses

We expect total operating expenses to grow at a CAGR of 27%, from Rmb0.7bn in 2017 to Rmb1.4bn in 2020. Sales and marketing expenses are the majority of operating expenses, accounting for 59% of total revenue in 2017. We expect this percentage to gradually fall to 37% in 2020, helped by operating leverage. Research and development expenses as a percentage of total revenue has been declining, from 19% in 2015 to 11% in 2017, and we expect this percentage to remain stable over 2018-20 in order to maintain technology innovation. General and administrative expenses accounted for 11% of total revenue in 2017, and we expect this percentage to gradually decline to 7% in 2020.

Exhibit 71: Operating expenses as % of revenue
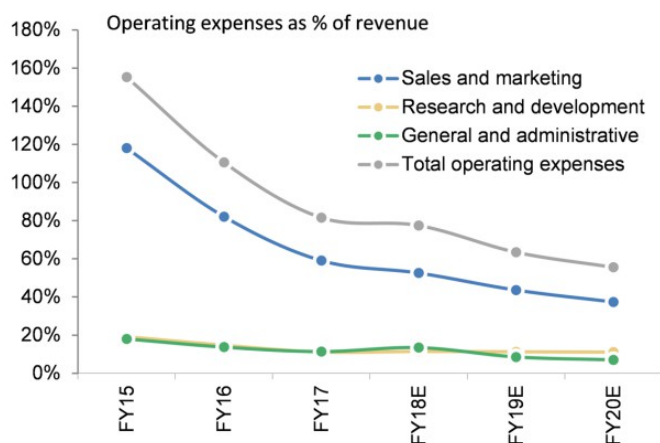
Source: Company data, Morgan Stanley Research (E) estimates.

Exhibit 72: Cost of revenue breakdown
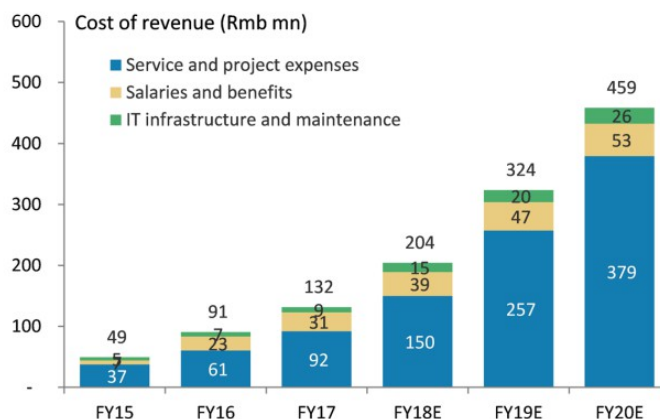
Source: Company data, Morgan Stanley Research (E) estimates.

Exhibit 73: Operating expense breakdown
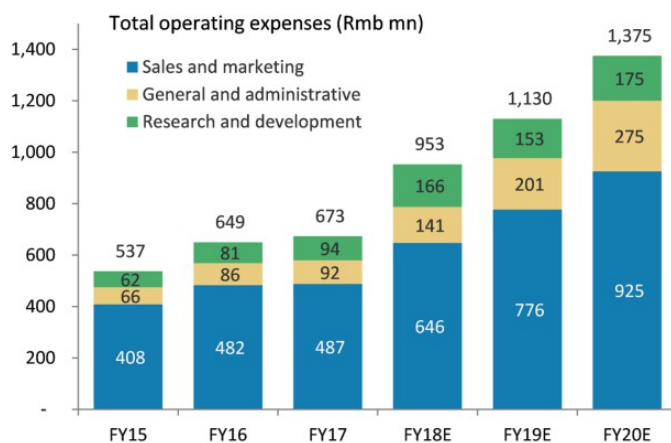
Source: Company data, Morgan Stanley Research (E) estimates.

Exhibit 74: Staff cost breakdown, by function
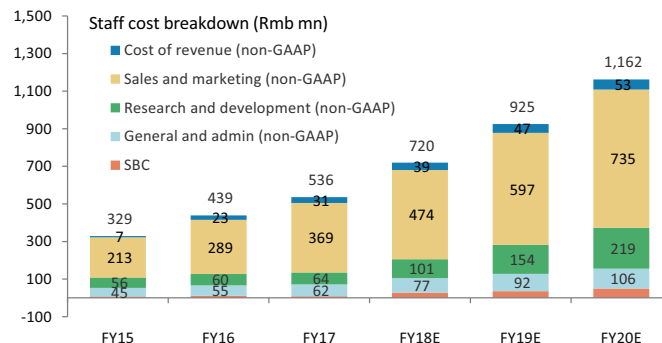
Source: Company data, Morgan Stanley Research (E) estimates.

3. Cash flow and balance sheet

Operating cash flow turned positive, at Rmb191mn in 2017, from a loss of Rmb62mn in 2016. We think the company has strong working capital and healthy cash flow, thanks to upfront payment for subscription packages and income received upon service rendered for transaction-based services.

The company operates an asset-light model with low capital expenditure. We forecast a capital expenditure of Rmb16mn in 2018, up from Rmb6mn in 2017, primarily due to costs in building a new office.

The company has no debt and a net cash position of Rmb750mn in 2017 (including cash and cash equivalents, time deposits with banks, and wealth management products).

Exhibit 75: Operating cash flow
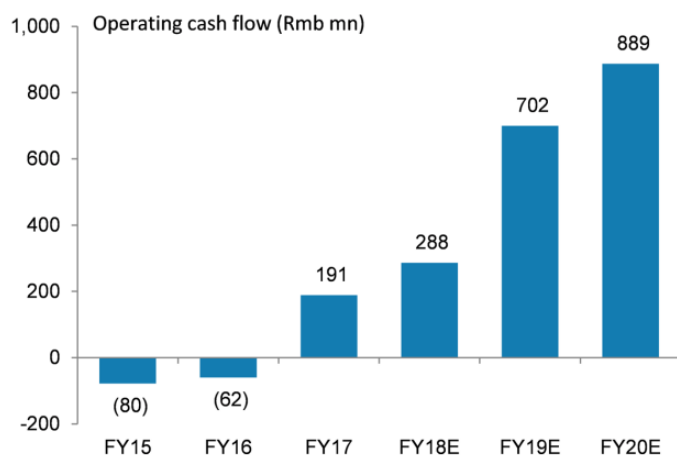
Source: Company data, Morgan Stanley Research (E) estimates.

Exhibit 76: Total cash and cash equivalents (including investments in deposits and wealth management products)
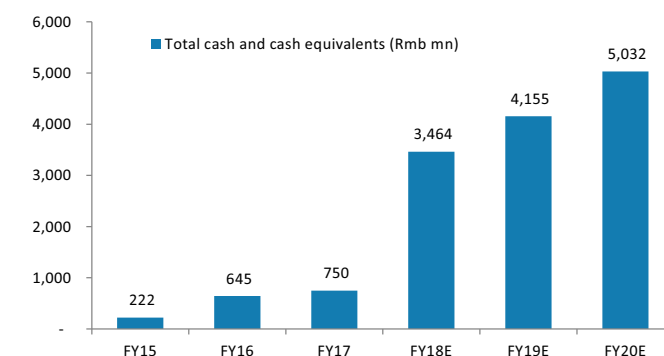
Source: Company data, Morgan Stanley Research (E) estimates

Appendix IV - Shareholders and Financing History

Exhibit 77: Shareholder structure

Shareholders	Shares	Series A-1 preferred shares	Series A-2 preferred shares	Series A-3 preferred shares	Total before IPO	Stake as of April 2018	IPO shares	Total after IPO	Stake after IPO	Total after greenshoe	Stake after IPO and greenshoe
May Flower	101,524,692	-	-	-	101,524,692	24.91%	-	101,524,692	20.49%	101,524,692	20.49%
Matrix Partners	-	99,804,139	-	-	99,804,139	24.49%	-	99,804,139	20.14%	99,660,939	20.11%
Giant Lily	-	97,370,133	-	-	97,370,133	23.89%	-	97,370,133	19.65%	97,226,933	19.62%
Tenzing	-	30,464,038	-	-	30,464,038	7.47%	-	30,464,038	6.15%	30,464,038	6.15%
Sanqi Weilai	-	-	5,452,724	27,312,231	32,764,955	8.04%	-	32,764,955	6.61%	32,764,955	6.61%
China Mobile Fund	-	-	-	13,435,471	13,435,471	3.30%	-	13,435,471	2.71%	13,435,471	2.71%
Huatai China	-	-	-	5,452,724	5,452,724	1.34%	-	5,452,724	1.10%	5,452,724	1.10%
Xiaoying	13,598,226	-	-	-	13,598,226	3.34%	-	13,598,226	2.74%	13,598,226	2.74%
Wisest Holding	13,145,086	-	-	-	13,145,086	3.23%	-	13,145,086	2.65%	13,145,086	2.65%
Public shareholders	-	-	-	-	-	0.00%	88,000,000	88,000,000	17.76%	88,286,400	17.82%
Total	**128,268,004**	**227,638,310**	**5,452,724**	**46,200,426**	**407,559,464**	**100%**	**88,000,000**	**495,559,464**	**100%**	**495,559,464**	**100%**

Source: Company data.

Exhibit 78: Financing History

Date	Series	Amount (US$ mn)	Investors
Dec-10	Pre-A	1	Matrix Partners, Tenzing
Oct-11	A	5	Matrix Partners, Tenzing
Jan-13	B	6	Matrix Partners, Tenzing
Jul-14	C	65	Matrix Partners, Tenzing, Warburg Pincus
Jun-16	D	100	Sanqi Weilai (an entity designated by Shanghai Chuangji, Shanghai Zhenyi, Shanghai Weiyi, Beijing Tianshi and Tianhong), China Mobile Fund, Huatai China
Total		**240+**	

Source: Company data.

More on AlphaWise

AlphaWise Reports & Interactives

AlphaWise Reports & Interactives

AlphaWise conducts proprietary evidence-based investment research. For further information, please contact alphawise@morganstanley.com.

ALPHAWISE α
Evidence-based research

Recent Morgan Stanley Research Based on AlphaWise Evidence

Retail	John Glass	June 28, 2018

Starbucks: Where Did the Traffic Go?: We recently downgraded SBUX to EW, based in part on the results of our AlphaWise survey of over 2,000 US coffee drinkers. In this presentation, we explore the results of our survey in greater detail.

Software	Adam Wood	June 27, 2018

VAR survey results suggest caution…: Our AlphaWise survey of SAP re-sellers suggests a deceleration of spending into 2018 on the back of slower adoption of S/4 HANA. Complexity overtakes cost as the biggest barrier to adoption. Risk from SaaS players in CRM/HCM remains manageable. Stay Equal-weight.

	Simeon Gutman; Kimberly C Greenberger; Brian	
Retail	Nowak	June 26, 2018

Home Furnishings Survey Wave 22: W, WMT, AMZN, HD, and BBBY Takeaways: WMT and AMZN most frequently shopped and biggest winners in big ticket furniture. BBBY 20% coupon less effective; pricing weaker than W/AMZN. Home furnishings spend backdrop sideways. Market share analysis points to BBBY Q1 comps of -1% vs. consensus of 0%.

Software	Keith Weiss; Sanjit K Singh	June 20, 2018

1Q19 Preview: Can Shares Continue to Climb if Billings Growth Slows?: Expectations for 15% billings growth looks within reach given easier compares and a FX benefit. However, softer results from our AlphaWise reseller survey, lower durations and a smaller renewal base point to risk of slowing billings growth in FY19, making shares tough to own at ~30x CY19 FCF.

Software	Keith Weiss; Stan Zlotsky	June 14, 2018

4Q18 Preview – Can Oracle Make the Numbers Work?: Customer survey results trended positively for Fusion Applications adoption and migration to the newest database versions. While longer-term drags on the database business remain, we think stronger near-term trends can cut through the noise, exceeding low expectations.

India Industrial	Girish Achhipalia	June 13, 2018

India's Capex Journey Accelerates: While public capex momentum continues, our work suggests that a recovery in private capex is on the anvil. Markets are skeptical about public capex and, given the low visibility, are not pricing in a recovery in private capex. L&T is the best way to play the acceleration in India's capex journey.

	Guilherme F Paiva; Cesar A Medina; Regiane	

AlphaWise

Disclosure Section

Analyst Certification

The following analysts hereby certify that their views about the companies and their securities discussed in this report are accurately expressed and that they have not received and will not receive direct or indirect compensation in exchange for expressing specific recommendations or views in this report: Grace Chen; Alex Poon.

Unless otherwise stated, the individuals listed on the cover page of this report are research analysts.

Global Research Conflict Management Policy

Morgan Stanley Research has been published in accordance with our conflict management policy, which is available at www.morganstanley.com/institutional/research/conflictpolicies.

Important US Regulatory Disclosures on Subject Companies

As of June 29, 2018, Morgan Stanley beneficially owned 1% or more of a class of common equity securities of the following companies covered in Morgan Stanley Research: Momo Inc., Sohu.Com Inc, YY Inc..

Within the last 12 months, Morgan Stanley managed or co-managed a public offering (or 144A offering) of securities of Alibaba Group Holding, Bilibili Inc, China Literature Ltd, Momo Inc., Tencent Holdings Ltd., **Wise Talent Information Technology**.

Within the last 12 months, Morgan Stanley has received compensation for investment banking services from Alibaba Group Holding, Baidu Inc, Momo Inc., NetEase, Inc, Tencent Holdings Ltd., **Wise Talent Information Technology**.

In the next 3 months, Morgan Stanley expects to receive or intends to seek compensation for investment banking services from Alibaba Group Holding, Baidu Inc, Bitauto Holdings Ltd, China Literature Ltd, Ctrip.Com International Ltd, JD.com, Inc., Kingsoft Corp Ltd, Momo Inc., NetEase, Inc, Tencent Holdings Ltd., Weibo Corp, **Wise Talent Information Technology**.

Within the last 12 months, Morgan Stanley has received compensation for products and services other than investment banking services from Alibaba Group Holding, Baidu Inc, Bilibili Inc, Ctrip.Com International Ltd, Kingsoft Corp Ltd, NetEase, Inc, Tencent Holdings Ltd., Weibo Corp, YY Inc..

Within the last 12 months, Morgan Stanley has provided or is providing investment banking services to, or has an investment banking client relationship with, the following company: Alibaba Group Holding, Baidu Inc, Bilibili Inc, Bitauto Holdings Ltd, China Literature Ltd, Ctrip.Com International Ltd, JD.com, Inc., Kingsoft Corp Ltd, Momo Inc., NetEase, Inc, Tencent Holdings Ltd., Weibo Corp, **Wise Talent Information Technology**.

Within the last 12 months, Morgan Stanley has either provided or is providing non-investment banking, securities-related services to and/or in the past has entered into an agreement to provide services or has a client relationship with the following company: Alibaba Group Holding, Baidu Inc, Bilibili Inc, Ctrip.Com International Ltd, Kingsoft Corp Ltd, NetEase, Inc, Tencent Holdings Ltd., Weibo Corp, **Wise Talent Information Technology**, YY Inc..

Morgan Stanley & Co. LLC makes a market in the securities of Alibaba Group Holding, Autohome Inc, Baidu Inc, Bilibili Inc, Bitauto Holdings Ltd, Changyou.Com Ltd, Ctrip.Com International Ltd, JD.com, Inc., Kingsoft Corp Ltd, Momo Inc., NetEase, Inc, Sohu.Com Inc, Weibo Corp, YY Inc..

The equity research analysts or strategists principally responsible for the preparation of Morgan Stanley Research have received compensation based upon various factors, including quality of research, investor client feedback, stock picking, competitive factors, firm revenues and overall investment banking revenues. Equity Research analysts' or strategists' compensation is not linked to investment banking or capital markets transactions performed by Morgan Stanley or the profitability or revenues of particular trading desks.

Morgan Stanley and its affiliates do business that relates to companies/instruments covered in Morgan Stanley Research, including market making, providing liquidity, fund management, commercial banking, extension of credit, investment services and investment banking. Morgan Stanley sells to and buys from customers the securities/instruments of companies covered in Morgan Stanley Research on a principal basis. Morgan Stanley may have a position in the debt of the Company or instruments discussed in this report. Morgan Stanley trades or may trade as principal in the debt securities (or in related derivatives) that are the subject of the debt research report.

Certain disclosures listed above are also for compliance with applicable regulations in non-US jurisdictions.

STOCK RATINGS

Morgan Stanley uses a relative rating system using terms such as Overweight, Equal-weight, Not-Rated or Underweight (see definitions below). Morgan Stanley does not assign ratings of Buy, Hold or Sell to the stocks we cover. Overweight, Equal-weight, Not-Rated and Underweight are not the equivalent of buy, hold and sell. Investors should carefully read the definitions of all ratings used in Morgan Stanley Research. In addition, since Morgan Stanley Research contains more complete information concerning the analyst's views, investors should carefully read Morgan Stanley Research, in its entirety, and not infer the contents from the rating alone. In any case, ratings (or research) should not be used or relied upon as investment advice. An investor's decision to buy or sell a stock should depend on individual circumstances (such as the investor's existing holdings) and other considerations.

Global Stock Ratings Distribution

(as of July 31, 2018)

The Stock Ratings described below apply to Morgan Stanley's Fundamental Equity Research and do not apply to Debt Research produced by the Firm.

For disclosure purposes only (in accordance with NASD and NYSE requirements), we include the category headings of Buy, Hold, and Sell alongside our ratings of Overweight, Equal-weight, Not-Rated and Underweight. Morgan Stanley does not assign ratings of Buy, Hold or Sell to the stocks we cover.

Overweight, Equal-weight, Not-Rated and Underweight are not the equivalent of buy, hold, and sell but represent recommended relative weightings (see definitions below). To satisfy regulatory requirements, we correspond Overweight, our most positive stock rating, with a buy recommendation; we correspond Equal-weight and Not-Rated to hold and Underweight to sell recommendations, respectively.

STOCK RATING CATEGORY	COVERAGE UNIVERSE		INVESTMENT BANKING CLIENTS (IBC)			OTHER MATERIAL INVESTMENT SERVICES CLIENTS (MISC)	
	COUNT	% OF TOTAL	COUNT	% OF TOTAL IBC	% OF RATING CATEGORY	COUNT	% OF TOTAL OTHER MISC
Overweight/Buy	1164	37%	306	41%	26%	544	38%
Equal-weight/Hold	1347	43%	359	48%	27%	648	46%
Not-Rated/Hold	49	2%	4	1%	8%	7	0%
Underweight/Sell	546	18%	75	10%	14%	215	15%
TOTAL	3,106		744			1414	

Data include common stock and ADRs currently assigned ratings. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months. Due to rounding off of decimals, the percentages provided in the "% of total" column may not add up to exactly 100 percent.

Analyst Stock Ratings

Overweight (O). The stock's total return is expected to exceed the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Equal-weight (E). The stock's total return is expected to be in line with the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Not-Rated (NR). Currently the analyst does not have adequate conviction about the stock's total return relative to the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Underweight (U). The stock's total return is expected to be below the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Unless otherwise specified, the time frame for price targets included in Morgan Stanley Research is 12 to 18 months.

Analyst Industry Views

Attractive (A): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be attractive vs. the relevant broad market benchmark, as indicated below.

In-Line (I): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be in line with the relevant broad market benchmark, as indicated below.

Cautious (C): The analyst views the performance of his or her industry coverage universe over the next 12-18 months with caution vs. the relevant broad market benchmark, as indicated below.

Benchmarks for each region are as follows: North America - S&P 500; Latin America - relevant MSCI country index or MSCI Latin America Index; Europe - MSCI Europe; Japan - TOPIX; Asia - relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.

Important Disclosures for Morgan Stanley Smith Barney LLC Customers

Important disclosures regarding the relationship between the companies that are the subject of Morgan Stanley Research and Morgan Stanley Smith Barney LLC or Morgan Stanley or any of their affiliates, are available on the Morgan Stanley Wealth Management disclosure website at www.morganstanley.com/online/researchdisclosures. For Morgan Stanley specific disclosures, you may refer to www.morganstanley.com/researchdisclosures.

Each Morgan Stanley Equity Research report is reviewed and approved on behalf of Morgan Stanley Smith Barney LLC. This review and approval is conducted by the same person who reviews the Equity Research report on behalf of Morgan Stanley. This could create a conflict of interest.

Other Important Disclosures

Morgan Stanley & Co. International PLC and its affiliates have a significant financial interest in the debt securities of Alibaba Group Holding, Baidu Inc, Ctrip.Com International Ltd, Momo Inc., Tencent Holdings Ltd..

Morgan Stanley Research policy is to update research reports as and when the Research Analyst and Research Management deem appropriate, based on developments with the issuer, the sector, or the market that may have a material impact on the research views or opinions stated therein. In addition, certain Research publications are intended to be updated on a regular periodic basis (weekly/monthly/quarterly/annual) and will ordinarily be updated with that frequency, unless the Research Analyst and Research Management determine that a different publication schedule is appropriate based on current conditions.

Morgan Stanley is not acting as a municipal advisor and the opinions or views contained herein are not intended to be, and do not constitute, advice within the meaning of Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act.

Morgan Stanley produces an equity research product called a "Tactical Idea." Views contained in a "Tactical Idea" on a particular stock may be contrary to the recommendations or views expressed in research on the same stock. This may be the result of differing time horizons, methodologies, market events, or other factors. For all research available on a particular stock, please contact your sales representative or go to Matrix at http://www.morganstanley.com/matrix.

Morgan Stanley Research is provided to our clients through our proprietary research portal on Matrix and also distributed electronically by Morgan Stanley to clients. Certain, but not all, Morgan Stanley Research products are also made available to clients through third-party vendors or redistributed to clients through alternate electronic means as a convenience. For access to all available Morgan Stanley Research, please contact your sales representative or go to Matrix at http://www.morganstanley.com/matrix.

Any access and/or use of Morgan Stanley Research is subject to Morgan Stanley's Terms of Use (http://www.morganstanley.com/terms.html). By accessing and/or using Morgan Stanley Research, you are indicating that you have read and agree to be bound by our Terms of Use (http://www.morganstanley.com/terms.html). In addition you consent to Morgan Stanley processing your personal data and using cookies in accordance with our Privacy Policy and our Global Cookies Policy (http://www.morganstanley.com/privacy_pledge.html), including for the purposes of setting your preferences and to collect readership data so that we can deliver better and more personalized service and products to you. To find out more information about how Morgan

Hong Kong Limited. An updated list can be found on HKEx website: http://www.hkex.com.hk.

The information in Morgan Stanley Research is being communicated by Morgan Stanley & Co. International plc (DIFC Branch), regulated by the Dubai Financial Services Authority (the DFSA), and is directed at Professional Clients only, as defined by the DFSA. The financial products or financial services to which this research relates will only be made available to a customer who we are satisfied meets the regulatory criteria to be a Professional Client.

The information in Morgan Stanley Research is being communicated by Morgan Stanley & Co. International plc (QFC Branch), regulated by the Qatar Financial Centre Regulatory Authority (the QFCRA), and is directed at business customers and market counterparties only and is not intended for Retail Customers as defined by the QFCRA.

As required by the Capital Markets Board of Turkey, investment information, comments and recommendations stated here, are not within the scope of investment advisory activity. Investment advisory service is provided exclusively to persons based on their risk and income preferences by the authorized firms. Comments and recommendations stated here are general in nature. These opinions may not fit to your financial status, risk and return preferences. For this reason, to make an investment decision by relying solely to this information stated here may not bring about outcomes that fit your expectations.

The trademarks and service marks contained in Morgan Stanley Research are the property of their respective owners. Third-party data providers make no warranties or representations relating to the accuracy, completeness, or timeliness of the data they provide and shall not have liability for any damages relating to such data. The Global Industry Classification Standard (GICS) was developed by and is the exclusive property of MSCI and S&P.

Morgan Stanley Research, or any portion thereof may not be reprinted, sold or redistributed without the written consent of Morgan Stanley.

INDUSTRY COVERAGE: China Internet and Other Services

COMPANY (TICKER)	RATING (AS OF)	PRICE* (08/01/2018)
Alex Poon		
Bilibili Inc (BILI.O)	O (04/23/2018)	US$11.71
Changyou.Com Ltd (CYOU.O)	U (03/28/2018)	US$13.64
Kingsoft Corp Ltd (3888.HK)	O (03/28/2018)	HK$18.50
Momo Inc. (MOMO.O)	O (03/28/2018)	US$41.02
NetEase, Inc (NTES.O)	E (09/24/2015)	US$258.00
Sohu.Com Inc (SOHU.O)	U (03/28/2018)	US$25.20
Wise Talent Information Technology (6100.HK)	O (08/01/2018)	HK$27.30
YY Inc. (YY.O)	E (03/28/2018)	US$93.23
Eddy Wang, CFA		
Autohome Inc (ATHM.N)	O (12/13/2017)	US$96.75
Bitauto Holdings Ltd (BITA.N)	O (12/13/2017)	US$24.32
Grace Chen		
Alibaba Group Holding (BABA.N)	O (12/08/2016)	US$187.23
Baidu Inc (BIDU.O)	O (02/15/2018)	US$247.18
China Literature Ltd (0772.HK)	E (12/12/2017)	HK$67.85
Ctrip.Com International Ltd (CTRP.O)	E (01/05/2018)	US$41.15
JD.com, Inc. (JD.O)	E (11/14/2017)	US$35.86
Tencent Holdings Ltd. (0700.HK)	O (01/09/2017)	HK$355.00
Weibo Corp (WB.O)	O (01/05/2018)	US$82.75

Stock Ratings are subject to change. Please see latest research for each company.

* Historical prices are not split adjusted.