

投资决策

买入

科大讯飞 (002230.SZ)

潜在回报: 26%



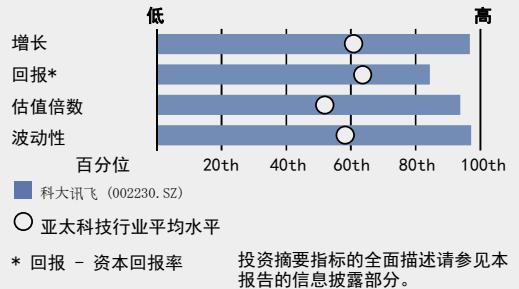
证券研究报告

尽在言语中；恢复评级并评为买入(摘要)

建议理由

我们对科大讯飞的看法乐观，因为：**1) 公司是中国快速增长的语音识别市场的龙头企业，市场份额达44%，2) 公司在电信运营商、教育和政府等垂直领域拥有成熟的变现策略，3) 公司可能在最近对新产品进行大力营销之后降低销售管理费用率。**尽管当前股价对应53倍的2016年预期市盈率（而其历史均值为60倍，全球同业为26倍），我们认为鉴于科大讯飞2016-18年净利润的年均复合增速为49%（全球同业为19%），其估值拥有上行空间。我们恢复对该股的评级并评为买入，12个月目标价格为人民币34.80元，对应26%的上行空间。

投资摘要



推动因素

- 在垂直领域将技术进一步变现：**我们预计科大讯飞将继续通过向垂直行业提供语音合成/识别产品和服务来扩大客户基础。我们对公司收购教育软件/IT服务供应商乐知行的可能性不予评论，但该收购应会帮助公司扩大教育行业的客户。
- 新产品的贡献：**2015年底以来，科大讯飞已经推出多个新产品将语音识别和人工智能研发变现，如智慧校园解决方案、为互联网和工业客户提供的人机交互界面、为学校师生提供的智能诊断和分析平台等。我们预计这些业务将推动2016年的业绩增长。我们预计2016-18年公司收入的年均复合增速将达到强劲的41%。
- 市场盈利预测上调：**我们的2016-18年每股盈利预测较万得一致预期高23%-55%。虽然我们预计公司收入将强劲增长并会对销售管理费用实行成本控制，但市场似乎并未计入公司利润率改善这一因素。

主要数据

	12/15	12/16E	12/17E	12/18E	当前
股价 (Rmb)	0.34	0.53	0.84	1.17	27.57
12个月目标价格 (Rmb)	7.9	55.3	58.6	39.1	34.80
市值 (Rmb mn / US\$ mn)	0.33	0.53	0.84	1.17	35,472.3 / 5,407.6
外资持股比例 (%)	0.34	0.53	0.84	1.17	--
	105.5	52.2	32.9	23.6	
市盈率 (X)	7.4	5.3	4.8	4.2	
市净率 (X)	80.8	36.6	23.4	16.8	
EV/EBITDA (X)	0.3	0.6	0.9	1.3	
股息收益率 (%)	8.5	10.5	15.2	18.8	
净资产回报率 (%)	14.8	17.3	22.0	24.7	

估值

我们维持预测不变。12个月目标价格为人民币34.80元，基于26倍的同业预期市盈率均值乘以2020年预期每股盈利人民币1.82元，并以7.9%的股权成本贴现回2016年。我们的目标价格对应66倍的2016年预期市盈率。

股价走势图



* 全文翻译将随后提供

所属投资名单

亚太买入名单

股价表现 (%)	3个月	6个月	12个月
绝对	1.2	(21.7)	(51.3)
相对于沪深300指数	(2.5)	(9.0)	(17.6)

资料来源：公司数据、高盛研究预测、FactSet (股价为5/27/2016收盘价)

行业评级：中性

金俊 执业证书编号: S142051110003
+86(10)6627-3467 carol.jin@ghsl.cn 北京高华证券有限责任公司

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科大讯飞：财务数据概要

损益表 (Rmb mn)				资产负债表 (Rmb mn)					
	12/15	12/16E	12/17E	12/18E		12/15	12/16E	12/17E	12/18E
主营业务收入	2,500.8	3,730.9	5,530.3	7,421.4	现金及等价物	2,644.7	2,004.2	1,261.7	613.4
主营业务成本	(1,278.0)	(1,826.2)	(2,639.1)	(3,478.0)	应收账款	1,579.0	2,304.5	3,340.2	4,380.7
销售、一般及管理费用	(625.7)	(859.7)	(1,247.4)	(1,631.0)	存货	312.7	446.8	645.7	850.9
研发费用	(337.8)	(485.6)	(674.2)	(895.7)	其它流动资产	230.5	230.5	230.5	230.5
其它营业收入/ (支出)	0.0	0.0	0.0	0.0	流动资产	4,766.9	4,986.0	5,478.1	6,075.6
EBITDA	528.8	933.3	1,488.6	2,119.2	固定资产净额	1,056.1	1,773.3	2,719.1	3,823.0
折旧和摊销	(269.5)	(373.9)	(519.1)	(702.4)	无形资产净额	1,411.2	1,548.2	1,774.7	2,075.4
EBIT	259.3	559.4	969.5	1,416.7	长期投资	568.6	568.6	568.6	568.6
利息收入	37.8	43.4	32.9	20.7	其它长期资产	587.5	587.5	587.5	587.5
财务费用	0.0	0.0	0.0	0.0	资产合计	8,390.3	9,463.6	11,128.0	13,130.1
联营公司	0.0	0.0	0.0	0.0					
其它	167.5	184.0	232.3	280.6					
税前利润	464.5	786.9	1,234.8	1,718.1					
所得税	(28.0)	(97.2)	(123.5)	(171.8)					
少数股东损益	(11.3)	(6.9)	(28.7)	(40.0)					
优先股股息前净利润	425.3	682.8	1,082.6	1,506.3					
优先股股息	0.0	0.0	0.0	0.0					
非经常性项目前净利润	425.3	682.8	1,082.6	1,506.3					
税后非经常性损益	0.0	0.0	0.0	0.0					
净利润	425.3	682.8	1,082.6	1,506.3					
每股基本盈利 (非经常性项目前) (Rmb)	0.34	0.53	0.84	1.17					
每股基本盈利 (非经常性项目后) (Rmb)	0.34	0.53	0.84	1.17					
每股摊薄盈利 (非经常性项目后) (Rmb)	0.33	0.53	0.84	1.17					
每股股息 (Rmb)	0.10	0.16	0.25	0.35					
股息支付率 (%)	29.5	30.4	30.4	30.4					
自由现金流收益率 (%)	(0.8)	(1.4)	(1.5)	(0.9)					
增长率和利润率 (%)	12/15	12/16E	12/17E	12/18E					
主营业务收入增长率	40.9	49.2	48.2	34.2	比率	12/15	12/16E	12/17E	12/18E
EBITDA增长率	14.6	76.5	59.5	42.4	CR0CI (%)	14.8	17.3	22.0	24.7
EBIT增长率	(2.9)	115.8	73.3	46.1	净资产回报率 (%)	8.5	10.5	15.2	18.8
净利润增长率	12.1	60.5	58.6	39.1	总资产回报率 (%)	6.3	7.6	10.5	12.4
每股盈利增长	7.9	55.3	58.6	39.1	平均运用资本回报率 (%)	11.5	13.9	18.0	20.0
毛利率	48.9	51.1	52.3	53.1	存货周转天数	70.4	75.9	75.5	78.5
EBITDA利润率	21.1	25.0	26.9	28.6	应收账款周转天数	209.3	190.0	186.3	189.9
EBIT利润率	10.4	15.0	17.5	19.1	应付账款周转天数	299.2	290.2	288.9	300.3
					净负债/股东权益 (%)	(36.6)	(24.9)	(12.9)	(4.0)
					EBIT利息保障倍数 (X)	NM	NM	NM	NM
现金流量表 (Rmb mn)	12/15	12/16E	12/17E	12/18E					
优先股股息前净利润	425.3	682.8	1,082.6	1,506.3	估值	12/15	12/16E	12/17E	12/18E
折旧及摊销	269.5	373.9	519.1	702.4	基本市盈率 (X)	105.5	52.2	32.9	23.6
少数股东权益	11.3	6.9	28.7	40.0	市净率 (X)	7.4	5.3	4.8	4.2
运营资本增减	(126.1)	(346.8)	(474.2)	(461.1)	EV/EBITDA (X)	80.8	36.6	23.4	16.8
其它	(64.4)	0.0	0.0	0.0	企业价值/总投资现金 (X)	5.4	3.7	3.2	2.6
经营活动产生的现金流	515.6	716.8	1,156.2	1,787.6	股息收益率 (%)	0.3	0.6	0.9	1.3
资本开支	(890.0)	(1,228.1)	(1,691.3)	(2,107.1)					
收购	0.0	0.0	0.0	0.0					
剥离	0.4	0.0	0.0	0.0					
其它	(467.0)	0.0	0.0	0.0					
投资活动产生的现金流	(1,356.6)	(1,228.1)	(1,691.3)	(2,107.1)					
支付股息的现金 (普通股和优先股)	(163.5)	(129.2)	(207.4)	(328.8)					
借款增减	247.0	0.0	0.0	0.0					
普通股发行 (回购)	2,306.6	0.0	0.0	0.0					
其它	28.9	0.0	0.0	0.0					
筹资活动产生的现金流	2,419.0	(129.2)	(207.4)	(328.8)					
总现金流	1,578.0	(640.5)	(742.5)	(648.3)					

注：最后一个实际年度数据可能包括已公布和预测数据。

资料来源：公司数据、高盛研究预测

对此报告有贡献的人员

金俊

carol.jin@ghsl.cn

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Prices in the report are based on the market close of May 26, 2016, unless stated otherwise.

Gao Hua Securities acknowledges the role of Steph Xu of Goldman Sachs in the preparation of this product.

Glossary of terms

Speech synthesis: Also known as **Text to Speech (TTS)**, its main function is to convert text into intelligible voices, in other words, let machines talk like humans.

Speech recognition: The Auto Speech Recognition (ASR) technology aims to equip a computer with "ears" so that it can hear human speech and extract text information. In doing so, it enables **human-machine communication and interaction** based on the most natural and convenient means of communication.

Artificial intelligence: This refers to the simulation of human intelligence by machine and enables the machine to perform functions like understanding, learning, reasoning, and decision-making similar to humans.



Executive Summary: More talking, less typing; reinstate at Buy

We are Buy-rated on iFLYTEk. Our 12-month target price of Rmb34.80 offers 26% upside potential, the highest among our A-share software coverage. iFLYTEk is a leading speech synthesis and recognition provider in China, and we believe it will be a key beneficiary as we move towards verbal commands to interact with machines, away from typing or touch-based communication. We see three reasons to be positive on iFLYTEk:

#1. Industry leader in a fast-growing market with 55% 2-year CAGR

SIAC forecasts China speech recognition market to grow at 55% 2015-17 CAGR, as speech recognition becomes an important human-machine interface tool with increasing application across different occasions and devices. iFLYTEk is currently the largest speech recognition technology provider in China, with a 44% market share, followed by Baidu's 28% and Apple's 7%. We see its efforts in technology innovation and commercialization, like collaboration with research institutions in universities in developing speech recognition technology, leading the nation-supported artificial intelligence (AI) project, and strong focus on the application of these technologies in verticals, as key to its industry leadership. As such, we expect iFLYTEk to be the biggest beneficiary of the fast-growing China market, with a strong revenue growth at 31% 2016-20 CAGR.

#2. Strong monetization strategy in verticals

With the advancement of AI technology and speech recognition being an integral part of this, we see iFLYTEk extending its technology know-how in this space. We believe iFLYTEk's strong emphasis on monetizing its speech recognition technology has helped build a broad client base ranging from industrial players to government and education institutions. With its early entry to the speech recognition market in 2008, it has established a strong technology edge and client franchise advantage compared to its peers (closest peers Baidu and Apple mainly develop for in-house usage). Hence we expect iFLYTEk to be able to "deeply entrench" itself in verticals like telco, education, and government to drive voice-related business revenues and forecast 35% voice-related revenue 2016-20 CAGR. We expect this to be supported by voice-related software (39% CAGR), and voice-related application in verticals e.g., telco (26% CAGR), government (38% CAGR), and education (37% CAGR).

#3. Improving operating leverage with SG&A cuts

After aggressively marketing its new products in 2015 and 1Q2016, we expect iFLYTEk to cut its SG&A expense ratio to 36% of total revenue in 2016 from 39% in 2015, leading to a 49% net income CAGR for 2016-18. We forecast 2016-18 revenue CAGR of 41% and SG&A CAGR of 37.1%, resulting in 150bp operating leverage improvement.

Room for valuation to expand

iFLYTEk currently trades at 53X 2016E P/E with a 49% 2016-18E net income CAGR vs. its historical average of 60X. Global peers on average trade at 26X 2016E P/E with 19% 2016-18E net income CAGR. We see potential for iFLYTEk's valuation to expand given its strong growth prospects (our target price implies 66X 2016E P/E).

A technology & market leader in China speech recognition market

Speech recognition (SR) technology was first commercialized in the late 1990s. Due to the high technology entry barrier, most SR companies were initially developed from laboratories. Apple's Siri and Nuance were both originally from the Speech Technology and Research Laboratory of SRI International, founded as Stanford Research Institute by Stanford University in 1946.

iFLYTEK was founded by the students of the University of Science and Technology of China (USTC) in 1999 with its headquarters in Hefei, Anhui, and went public in 2008. The company has extended its technology from speech synthesis, to speech recognition, and is now developing artificial intelligence (AI) technology.

#1 Strong track record of technology leadership

iFLYTEK has been won various awards and competitions in the voice intelligence space, from the early technology of speech synthesis to the current speech recognition (see Exhibits 1-3).

Exhibit 1: iFLYTEK has been the winner for the past 10 Blizzard Challenge English Speech Synthesis competitions

Last 10-year average score for speech synthesis

Score	Naturalness (Novel)	Naturalness (News)	Similarity
iFLYTEK	4.2	4.1	4.1
Second-runner	3.6	3.6	3.4

Note: 1 (very unnatural) to 5 (very natural)

Competitors included: Microsoft, IBM, MIT, CMU, NITech, ATR, etc.

Source: Company data.

Exhibit 2: iFLYTEK maintained a top 3 position in the past three NIST (National Institute of Standards and Technology of US) global speaker recognition evaluation

Speech recognition evaluation competition

Year	Task	Data scale	Top - 3 Players
2008	Microphone and telephone voice recording; common/cross channel test	3000 people, 0.1mn pairs	iFLYTEK, IIR, loquendo
2010	Newly-added loud voices and whisper test	5000 people, 0.61mn pairs	iFLYTEK, MIT, SVIST
2012	Focused on phone calls with background noise scenario	2000 people, 1.88mn pairs	iFLYTEK, Bruno Uni. Of Tech, IIR

Note: competitors included CMU, MIT, Standard, Tsinghua, Motorola, IBM, IIR (Singapore), loquendo (Italy) and other 50 voice research institutions

Source: Company data.

Exhibit 3: iFLYTEK came in first for accuracy in another competition

BMW global Chinese voice technology evaluation

2015 BMW Global Chinese speech technology competition results

iFLYTEK	Accuracy:86.9%	Subjective score: 75.1%
Nuance	Accuracy:74.7%	Subjective score: 86.8%

Note: Accuracy refers to the percentage of human speech iFLYTEK's software was able to recognize; iFLYTEK exceeded the runner up Nuance by 12pp.

Source: Company data.

#2 Strong market leadership in industrial and consumer markets

iFLYTEk provides speech recognition products and services in two ways:

1) Voice-related basic software to consumers (e.g., iFLYTEk Input, Lingxi Voice Assistant, iFlyDictation etc.), telecom operators, smartphone manufacturers, and auto OEMs;

2) IT systems and solutions enabled by speech recognition and artificial intelligence technology to industrial and government customers.

With its early entry into speech recognition space, it has built a broad customer base, ranging from telecom operators, auto OEMs such as BMW and Mercedes, tech companies to government and education institutions (Exhibit 4). According to Speech Industry Alliance of China (SIAC), iFLYTEk has a **44% market share in China in 2015**, followed by Baidu's 28%, and Apple's 7% (Exhibit 5), while it is fifth in the global market, with a 5% market share (Exhibit 6).

Exhibit 4: iFLYTEk has built a broad client base and partnership franchise in China

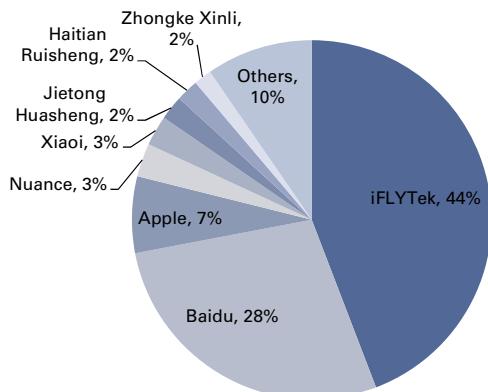
iFLYTEk's partnership and clients list as of 2015

iFLYTEk partnership and clients					
Telecom	China Mobile	China Unicom	China Telecom		
Tech	Intel	Huawei	Xiaomi	Tencent	
Auto OEM	BMW	Geely	Mercedes-Benz	Toyota	SAIC
	FAW	Great Wall Motor	Changan Automobile	Chery	JAC
	Haima Motor	Southeast Automobile	Guangzhou Automobile		
Auto electronics	Continental	Delphi	FlyAudio	RoadRover	Coagent
Smart hardware	China Smart Home Industry Alliance	Yunji Technology	UBTech	IU House	JD.com
Financial institutions	ICBC	Merchants Bank	Bank of Communications	CCB	SPDB
		Sunshine Insurance Group			
	Ping An Insurance				
Television vendors	TCL	Konka	Changhong	Skyworth	Hisense
	Haier				
Broadcasting	Tianjin Television & Broadcasting Group	Guangdong Television & Broadcasting Group	Nanjing Television & Broadcasting Group	Anhui Television & Broadcasting Group	Gehua CATV
	CNTV	Guangzhou iMacro	SHENZHEN COSHIP	Shenzhen MELE Digital	Routon
Government	State Grid	Government agencies			
Education institutions	Guangdong	Jiangsu	Guangxi	Chongqing	...

Source: Company data.

Exhibit 5: iFLYTEk is the industry leader in China with a 44% market share...

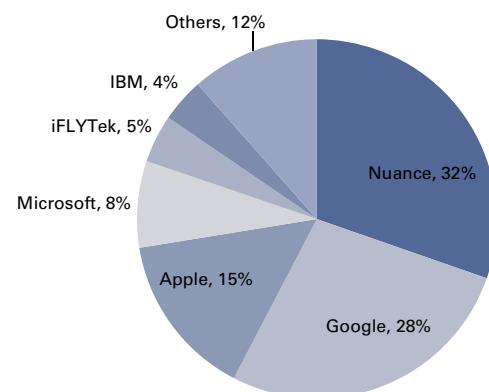
China's speech recognition market share, 2015



Source: SIAC.

Exhibit 6: ... and fifth in the global market, with a 5% market share

Global speech recognition market share, 2015



Source: SIAC.

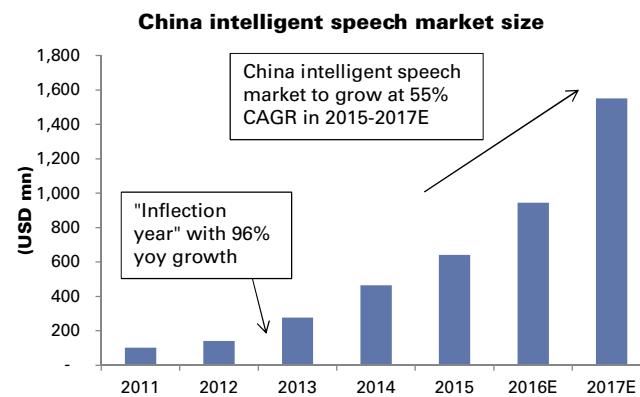
Well-positioned in China's fast-growing speech recognition market

We see speech recognition as an integral part of next-gen technology in human-machine interface (internet of things), as a step up from the current touch screen interaction on devices like smartphones and tablets. We believe speech recognition can be widely applied across different situations and devices (see section on page 12 onwards).

According to SIAC, the global speech recognition market has been growing at 33% CAGR in the last four years. While China's speech recognition industry is relatively small compared to the global market, accounting for only 10% of the total, the Chinese market has outpaced the global market, with a 58% CAGR in the last four years. We believe the robust growth in 2013 was an inflection point for the industry (Exhibit 7). SIAC forecasts a 55% CAGR in the next two years for China, with China's share in the global market increasing to 15% in 2017 (Exhibit 8).

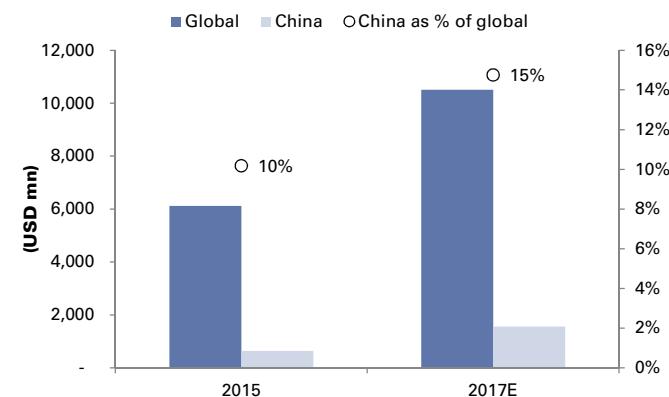
We believe iFLYTEK is well positioned to benefit from the fast growth in China. As the industry leader in China, it continues to pioneer new technology in the speech recognition space, starting from voice synthesis partnerships with telecom operators and gaining a competitive advantage in its voice database which accelerated its R&D in speech recognition to semantic understanding and deep learning.

Exhibit 7: China market is expected to grow at 55% CAGR
China intelligent speech market size, 2011-2017



Source: SIAC.

Exhibit 8: China market is expected to make up 15% of the global intelligent speech market in 2017, vs. 10% in 2015
Market size for China and global markets



Source: SIAC.

From speech recognition to artificial intelligence

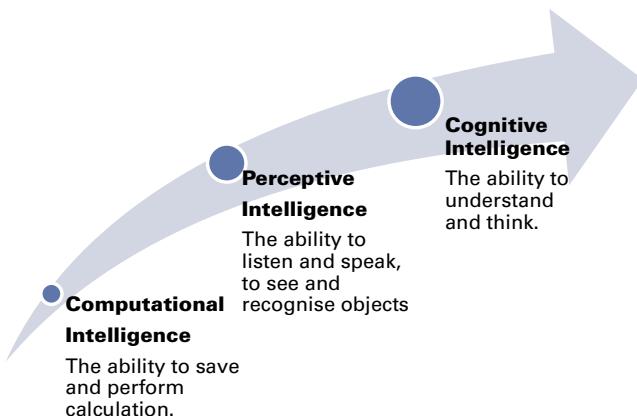
With the development in robotics and automation, there is an increasing demand for the human-machine interface to evolve, i.e., to make robots and machines understand and communicate with human beings. Hence, we see the foray into the artificial intelligence space as a natural progression for speech recognition companies.

As an example of iFLYTEK's development in this area, it launched the Super Brain project as a leading participant in late 2014, a pioneer project supported by the government. The aim is to develop a robot with artificial intelligence by 2017 such that it is able to ace China's national college entrance exams and gain admission to first-class Chinese universities.

Beside this Super Brain project, iFLYTEK has developed technologies in knowledge management and inference learning, and is trying to commercialize the technologies in specific vertical sectors such as education.

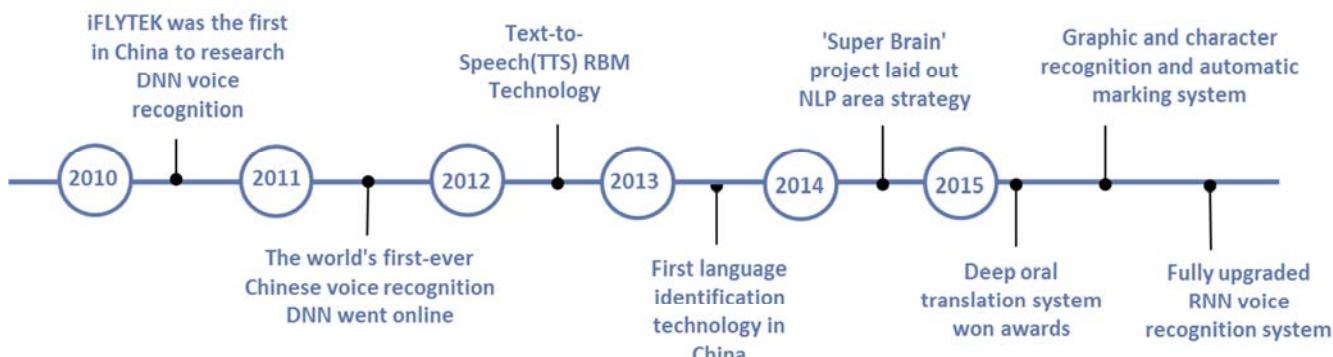
Exhibit 9: The Super Brain project targets to develop a robot with the ability to understand and think

Super Brain Project roadmap



Source: Company data.

Exhibit 10: We see iFLYTEK's development in deep learning since 2010 as a foundation for its Super Brain project
iFLYTEK's technology development for deep learning



Note: DNN: deep neural network; NLP: natural language processing; RBM: restricted Boltzmann machine; RNN: recurrent neural network

Source: Company data.

Monetization is key: Focus on telcos, education, and government

iFLYTEK has stated that it is focusing on monetizing its technology. We think its strategy of focusing on specific verticals such as telco, education, and government is an efficient way to do so, allowing it to invest further in R&D.

Besides supplying its key voice-related basic software to auto OEMs, smartphone manufacturers, and telcos (12% of total revenue in 2015), another key revenue generator is its voice-related solutions for telcos, education, and government clients (13%, 26%, and 10% of 2015 revenue respectively; see Exhibit 11). We see this as a key differentiating factor from other players in China, like Baidu and Apple which mainly focus on internal applications rather than providing solutions to external clients. For example, Apple only applies the technology in Siri, and Baidu in Baidu search and Baidu voice assistant. iFLYTEK's first mover advantage and focus in these areas have led to a significant scale advantage, compared to other 2B companies(to business i.e., providing solutions, products and services to businesses rather than consumer, such as Nuance, Xiaoai, etc.).

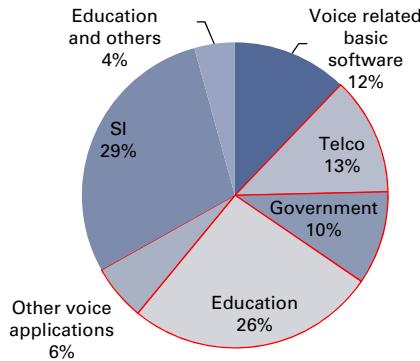
Internet players are now paying increasing focus to speech recognition. Sogou and Tencent have started in-house speech recognition R&D after a period of collaboration with traditional speech recognition players. Even without comparing the technological capabilities of these companies vs. iFLYTEK, we believe iFLYTEK's business model of 2B solutions differentiates it from these companies significantly.

In the education space, it leverages its technology in speech synthesis, speech recognition, and artificial intelligence, and provides products and solutions to education authorities, institutions, schools and students.

A few examples of iFLYTEK's products and solutions in the education industry are:

1. Machine marking system for oral Mandarin examinations nationwide and entrance examinations for secondary school or college in more than 10 provinces (including Guangdong, Jiangsu, Shanghai, Chongqing, Shandong);
2. Smart campus solution covering examination, assessment, teaching, learning, and administration for 15 provincial education platform, and 20+ cities/counties/ districts, covering more than 80mn teachers and students;
3. Personalized teaching and learning platform services, zhixue.com, for teachers and students, with more than 5mn users and 4000 schools.

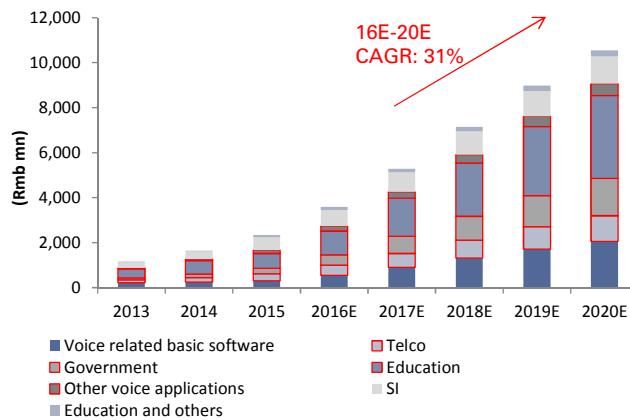
Exhibit 11: Telco, government, and education accounted for more than 50% of total revenue
Revenue breakdown by segment, 2015



Note: Telco, government, education and other voice applications are under the segment of voice related applications.

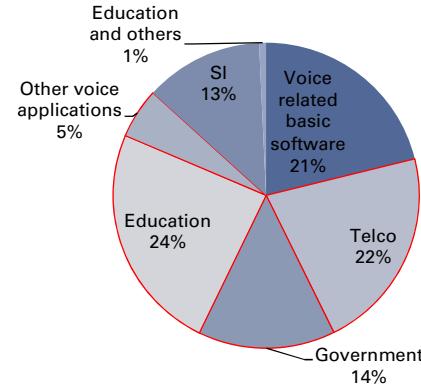
Source: Company data.

Exhibit 13: We expect voice-related business to grow strongly, driving 2016-20 total revenue CAGR of 31%
Revenue trend by segment, 2013-2020E



Source: Company data, Gao Hua Securities Research.

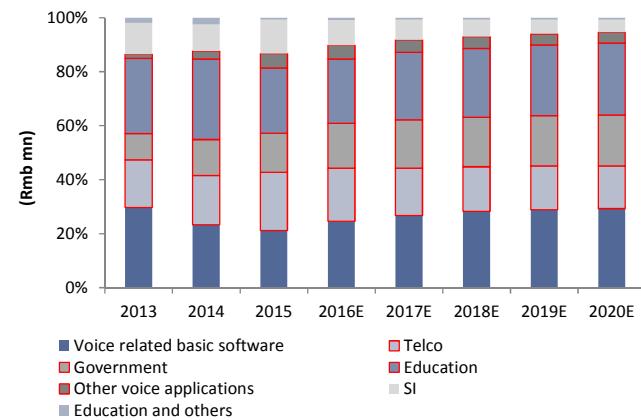
Exhibit 12: Voice-related business accounted for 86% of total gross profit
Gross profit breakdown by segment, 2015



Note: Telco, government, education and other voice applications are under the segment of voice related applications.

Source: Company data.

Exhibit 14: ... and contribute more at the gross profit level
Gross profit breakdown by segment, 2013-2020E



Source: Company data, Gao Hua Securities Research.

Proposed acquisition of education software and IT services provider Lezhixing

On May 18, iFLYTEK announced the acquisition of Lezhixing. Lezhixing is a leading software and IT services provider for education institutions, with a strong footprint in the Beijing area. According to the announcement, iFLYTEK will pay a total consideration of Rmb496mn (a cash payment of Rmb143mn and 12.9mn shares to Lezhixing's shareholders) in exchange for a 100% stake of Lezhixing. iFLYTEK also announced a private placement of 11.0mn shares to raise Rmb 300mn to fund the proposed acquisition and other investments.

The proposed transaction is subject to approvals from shareholders and the China Securities Regulatory Commission. If the proposed transaction were to complete, it would be consistent with iFLYTEK's strategy to strengthen its monetization of its speech recognition and artificial intelligence technology in the education sector.

While we do not take a view on the likelihood of the deal closing, for illustrative purposes, we present a scenario analysis of the potential EPS accretion. We base our scenario analysis on 2016-20 revenue forecasts provided by Lezhixing, $\pm 20\%$. We recognize that a range of outcomes exist outside the scenario we present here (Exhibit 15). We do not factor in the proposed transaction in our estimates.

Exhibit 15: For illustrative purposes, we present a scenario analysis for iFLYTEK if the proposed acquisition were to complete

Pro forma analysis for the proposed acquisition of Lezhixing

Pro forma analysis	2014	2015	2016E	2017E	2018E	2019E	2020E
Revenue forecast from Lezhixing ($\pm 20\%$)	162	220	203 - 304	223 - 334	244 - 366	264 - 396	281-422
Net profit forecast from Lezhixing	6	22	33 - 50	39 - 59	45 - 68	52 - 77	57 - 85
Net margin forecast from Lezhixing	4%	10%	17%	18%	18%	20%	20%
Total pro-forma revenue (iFLYTEK + Lezhixing)			3934 - 4035	5753 - 5865	7665 - 7788	9550 - 9682	11142 - 11283
% increase from iFLYTEK revenue			5.4% - 8.2%	4.0% - 6.0%	3.3% - 4.9%	2.8% - 4.3%	2.6% - 3.9%
Total pro-forma net income			716 - 733	1122 - 1141	1551 - 1574	2006 - 2032	2405 - 2433
% increase from iFLYTEK net income			4.9% - 7.4%	3.6% - 5.4%	3.0% - 4.5%	2.6% - 4.0%	2.4% - 3.6%
Current number of shares (mn)			1,292				
New shares under proposed deal (mn)			12.9				
New shares under announced private placement (mn)			11.0				
Pro-forma number of shares			1,316	1,316	1,316	1,316	1,316
Pro forma EPS			0.54 - 0.56	0.85 - 0.87	1.18 - 1.20	1.52 - 1.54	1.83 - 1.85
Potential accretion			3.00% - 5.40%	1.72% - 3.49%	1.12% - 2.59%	0.77% - 2.07%	0.55% - 1.74%

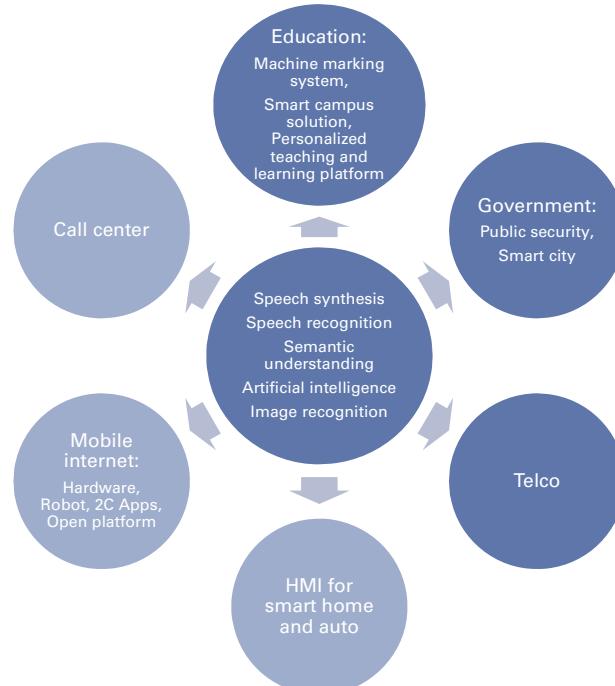
Note: We do not account for any potential synergies. Lezhixing's estimates are from the company, $\pm 20\%$; iFLYTEK's estimates are GHe.

Source: Company data, Gao Hua Securities Research.

Building an ecosystem for the long haul

While iFLYTEk monetizes its technology mainly by voice-related solution B2B business, it is also focusing on building an ecosystem to take advantage of the long-term opportunities. We think this is the crucial for its long-term development and industry leadership.

Exhibit 1: iFLYTEk has a broad business exposure from consumer level to industrial and government
iFLYTEk's business structure



Note: The bubbles with light blue background are under the segment of voice related basic software, while the others are under the segment of voice related applications.

Source: Company data.

Applications: Lingxi Voice Assistant, iFLY Input

iFLYTEk launched iFLY Input in 2011 which has more than 300mn users and supports Chinese to English translation and also 18 dialects (Exhibit 17).

iFLYTEk collaborated with China Mobile and launched Lingxi Voice Assistant in 2013. It supports dialing, messaging, real-time weather, restaurant searching, news, traffic, hotel and tickets booking, translation, providing a broad-based experience to users (Exhibit 18).

Hardware and robots

On the hardware side, iFLYTEk has seen a rapid growth in its user base and adoption in the past few months. Active users increased by 246.2% and the average human-machine interactions reached 22 times per user.

iFLYTEk developed Ding Dong smart speakers with JD.com in 2015 and provided its voice recognition technology to enable intelligence voice interaction between users and the speakers (i.e., users can 'tell' the speakers what songs to play or to switch off at a certain time). The speakers can also learn and adapt to users' preferences and make personalized song recommendations. Meanwhile, Ding Dong has access to Jingdong Microunion platform which

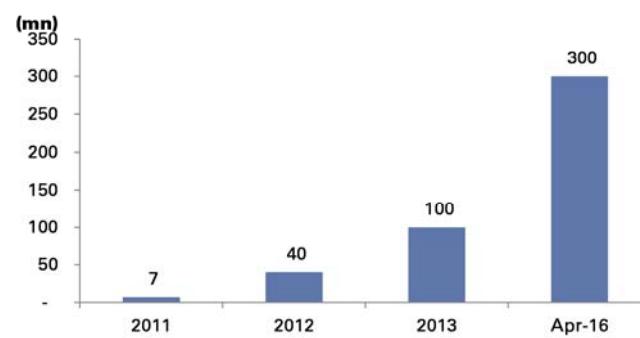
connects to a variety of smart devices. Users can therefore issue command to Ding Dong to control these devices e.g. turn the power off (Exhibit 19).

iFLYTEk also co-operated with Shenzhen UBTECH to develop simultaneous interpretation and verbal communication functions for UBTECH's intelligent robots. Robots will therefore be able to understand and speak the human language (Exhibit 20).

Voice Cloud open platform

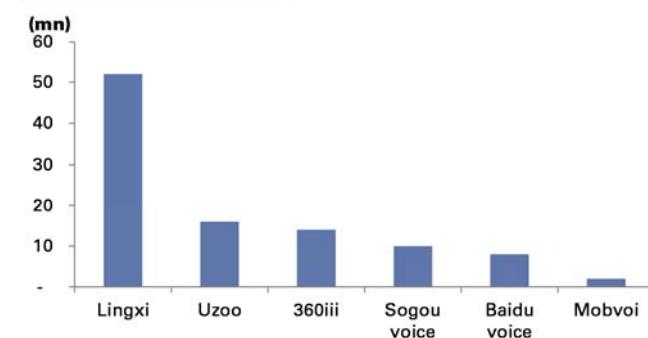
In 2010, iFLYTEk launched the Voice Cloud open platform which has become the largest voice and artificial intelligence open platform globally and currently co-operates with above 130,000 partners to serve more than 0.7bn end-users. Voice cloud provides speech input, voice integration functions to mobile applications, smart household devices, wearable devices and robots. Voice Cloud's clients include Didi, Weibo, Ctrip and PPTV etc.

Exhibit 2: iFLY Input now has 300mn+ users
iFLY Input



Source: Company data.

Exhibit 3: Lingxi has the largest user base compared to peers
Lingxi Voice Assistant



Source: Company data.

Exhibit 4: Users can use voice commands to control Ding Dong smart speakers to play songs and control other connected devices

Ding Dong smart speakers



Source: Company data.

Exhibit 5: iFLYTEK's technology enables robots to understand and speak our language
UBTECH Alpha2 intelligent robot



Source: Company data.

Exhibit 6: iFLYTEK's voice cloud platform is widely adopted in four dimensions by companies to develop human-machine interactions applications

Examples of iFLYTEK's voice cloud's clients

Mobile Application		Wearables	
Didi Chuxing	Taxi-calling	Glass X	Google X-ray Glass
Weibo	Chinese microblogging	Hi-Panda	Wifi-enabled watch
Gao De Map	Digital mapping	Zwatch	Smart watch
Ctrip	Online travel services		
PPTV	Video Streaming		

Smart Housing		Robot	
Ding Dong	Smart speakers	UBTech	Intelligent robot
Hikvision	Security surveillance equipment	ninebot	Transportation robot
Midea	Home electronic appliances	Zaijia	Intelligent robot

Source: Company data.

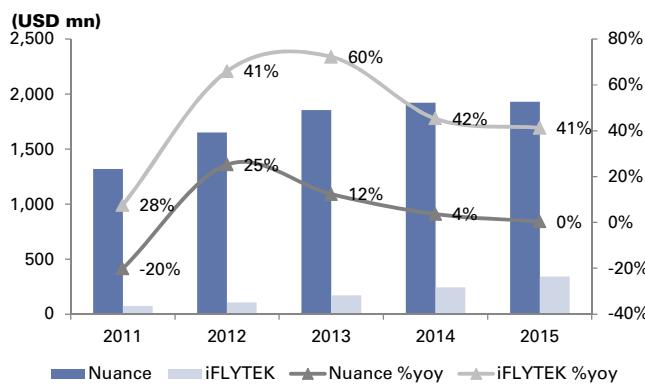
Comparison with a global peer: iFLYTEK vs. Nuance

Nuance Communications (NUAN) is currently the world's largest voice and language solutions provider with a 32% market share. Like iFLYTEK, it also operates a 2B model and specializes in four segments: healthcare, enterprise, mobile & consumer, imaging.

Nuance's revenue is 6X of iFLYTEK's in 2015 but it saw a much slower revenue growth in the last five years (Exhibit 22). While Nuance and iFLYTEK have similar gross margins, we note iFLYTEK has a much higher operating margin at 10.4% in 2015 vs. Nuance's 2.8% (Exhibit 23), due to its lower SG&A expenses.

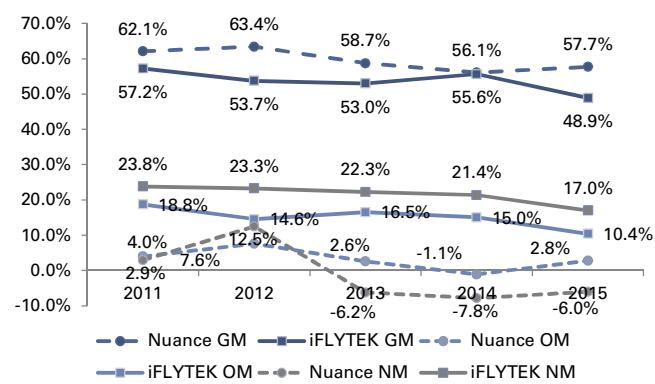
iFLYTEK benefits from the lower wage costs in China from engineers to sales personnel (i.e., lower sales expense to penetrate their clients).

Exhibit 16: iFLYTEK's revenues are relatively small vs. Nuance but growing at a much higher pace
Revenue and revenue growth for iFLYTEK and Nuance



Source: Company data, Bloomberg.

Exhibit 17: Both has similar GM but Nuance's OPM/NM are much lower
GM, operating margin and NM comparison



Source: Company data, Bloomberg.

Valuation: 26% upside potential on strong long-term growth

Long-term P/E methodology to capture medium/long-term growth potential

Compared with other technology names (hardware or electronics), software names tend to be less cyclical. They have high client retention rates due to significant switching costs, enabling them to generate stable and recurring revenue. Software development often requires **long-term R&D**, and this creates a substantial barrier to entry. As such, we believe it is appropriate to look at **longer-term growth**.

In line with the rest of our software coverage, we use a valuation approach for iFLYTEK that involves scoring on key factors for earnings growth and then calculating the **long-term implied valuation** before discounting it to derive our target price. See our September 25, 2015 report, *China: Technology: Software: Local leaders in fast-growing niches set to flourish; initiate on Aisino (CL-Buy), Yonyou (Sell)*, for more details.

Valuation methodology – a step by step

- We project our company **estimates to 2020**. Then we conduct a qualitative and quantitative assessment to underpin our assessment of long-term earnings.
- We apply an **exit P/E multiple to 2020 earnings** – based on multiples where global peers are trading at now on 2016 estimates. Given our positive outlook on iFLYTEK's

growth, we apply a 26X exit P/E multiple, in line with the higher-growth companies in our coverage.

- Using the resulting valuation – 2020E EPS times exit P/E – we **discount back to 2016** using iFLYTEk's cost of equity.

Rmb34.8 12-month target price, offering 26% potential upside.

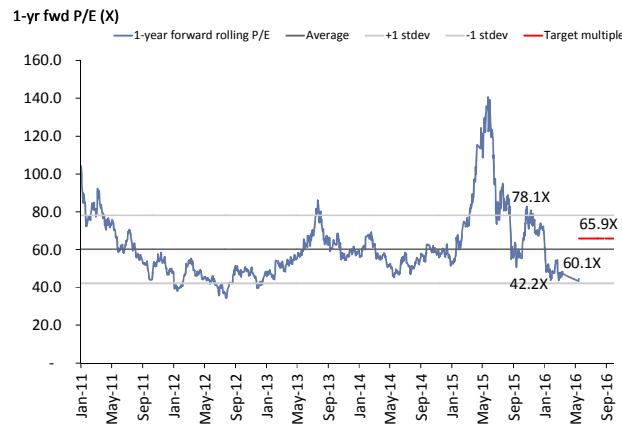
We forecast 36% net income 2016-2020 CAGR. We therefore apply our 26X exit P/E multiple to our 2020E EPS of Rmb1.82. We then discount this back to 2016E using its 7.9% cost of equity, to derive our 12-month target price of Rmb34.80. iFLYTEk now trades at 53X 2016E P/E with 49% 2016-18E net income CAGR vs. its historical average of 60X. Global peers on average trade at 26X 2016E P/E with 19% 2016-18E net income CAGR.

Exhibit 18: Our 2016-18 estimates are above Wind consensus by 23%/44%/55% Comparison summary of GHe versus Wind consensus

GHe vs WIND consensus			2016E			2017E			2018E		
	GS	Consensus	Diff.	GS	Consensus	Diff.	GS	Consensus	Diff.		
EPS (Rmb)	0.53	0.43	23%	0.84	0.58	44%	1.17	0.75	55%		

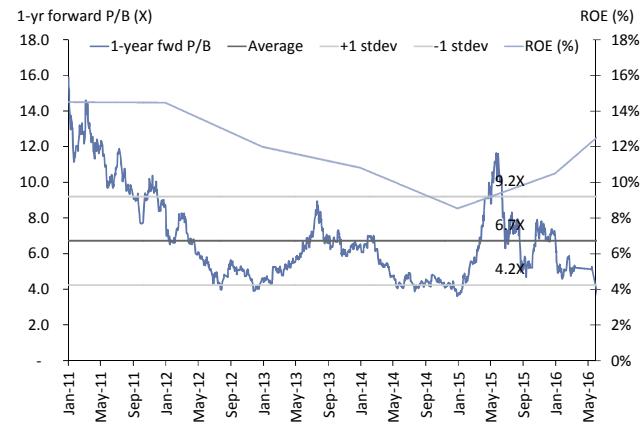
Source: Wind, Gao Hua Securities Research.

Exhibit 19: iFLYTEk is trading at 42.4X 12m fwd P/E, below its historical average P/E of 60X iFLYTEk 12m fwd P/E



Source: Datastream, Gao Hua Securities Research.

Exhibit 20: iFLYTEk is trading at 5.0X 12m fwd P/B, below its historical average P/B of 6.7X iFLYTEk 12m fwd P/B



Source: Datastream, Gao Hua Securities Research.

Exhibit 7: Global software peers are trading at c.23X at the median on 2016E P/E, while select high-growth names trade at a median of 26X

Global software valuation comp table

Company name	Ticker	Rating	Market cap (\$ mn)	P/E (X)			EV/EBITDA (X)			P/B (X)			ROE			EBITDA CAGR 2016E-18E	Net income CAGR 2016E-18E
				16E	17E	18E	16E	17E	18E	16E	17E	18E	16E	17E	18E		
Software																	
Anhui USTC iFLYTEK	002230.SZ	Buy	5,488	53.0	33.4	24.0	37.2	23.8	17.1	5.3	4.8	4.2	10%	15%	19%	51%	49%
Beijing Shiji Information	002153.SZ	Neutral	4,063	50.5	38.2	27.4	44.7	32.5	22.6	5.2	4.7	4.0	11%	13%	16%	39%	36%
Hunsun Technologies Inc.	600570.SS	Neutral	5,475	60.9	46.0	35.3	68.1	47.4	35.1	12.8	10.8	9.0	22%	25%	28%	38%	31%
Beijing Ultrapower Software	300002.SZ	Neutral	2,422	36.8	27.1	20.6	37.8	26.7	19.5	3.0	2.8	2.6	8%	11%	13%	39%	34%
Yonyou Network Technology	600588.SS	Sell	3,879	62.4	42.5	31.5	63.3	47.0	34.9	4.5	4.4	4.2	7%	10%	14%	37%	41%
Aisino	600271.SS	R.S.	6,935	21.3	15.7	12.8	10.8	7.6	5.8	4.7	3.9	3.2	24%	27%	28%	28%	29%
NavInfo Co.	002405.SZ	R.S.	2,872	79.6	56.5	37.4	29.9	21.0	14.3	7.0	6.4	5.7	9%	12%	16%	43%	46%
Hospitality solution																	
Sabre Corp.	SABR	Buy*	7,926	20.8	16.2	14.7	10.0	8.6	7.3	13.6	12.3	8.0	79%	80%	72%	12%	19%
Amadeus IT Holding SA	AMA.MC	Buy	19,633	19.7	18.0	16.9	11.4	10.1	9.2	6.5	5.5	4.7	35%	33%	30%	8%	9%
Global median				20.2	17.1	15.8	10.7	9.3	8.2	10.0	8.9	6.3	57%	57%	51%	10%	14%
OTA																	
Expedia Inc.	EXPE	Neutral	17,612	41.1	26.0	20.6	11.5	9.5	8.1	3.2	2.8	2.5	8%	12%	13%	14%	42%
Priceline.com Inc.	PCLN	Neutral	64,395	23.4	19.2	16.3	15.9	12.8	10.3	5.4	4.2	3.3	27%	25%	23%	18%	21%
Ctrip.com International	CTRP	Buy	21,936	84.4	31.6	20.2	61.9	27.6	16.8	3.1	3.0	2.8	4%	10%	15%	95%	118%
Qunar.com	QUNR	Neutral	4,973	(45.3)	93.5	25.3	59.7	19.8	67.8	40.6	15.9	(85%)	56%	92%	NA	NA	
Global median				32.3	28.8	20.4	15.9	20.2	13.6	4.3	3.6	3.1	6%	18%	19%	18%	42%
Transaction process																	
Automatic Data Processing Inc.	ADP	Neutral	39,988	25.2	22.1	19.6	15.0	13.3	11.9	9.3	8.7	7.4	36%	41%	41%	10%	12%
Paychex Inc.	PAYX	Neutral	19,439	24.7	22.4	20.5	14.2	12.9	11.7	11.4	10.6	9.8	46%	49%	50%	10%	10%
Fidelity National Information Services	FIS	Buy*	24,093	19.4	16.4	14.4	11.4	10.2	9.2	2.4	2.2	2.0	9%	12%	12%	9%	15%
Fiserv Inc.	FISV	Neutral	23,637	23.1	21.0	18.9	13.7	12.5	11.3	8.5	7.8	7.0	35%	33%	33%	6%	7%
Equifax Inc.	EFX	Neutral	14,812	33.2	28.1	24.4	15.8	13.6	11.9	5.3	5.0	4.5	18%	19%	20%	12%	16%
Experian	EXPN.L	Neutral	18,275	19.9	19.0	17.6	12.1	11.2	10.2	6.6	5.8	5.0	33%	32%	31%	6%	7%
Edenred	EDEN.PA	Neutral	4,171	19.0	17.2	14.8	14.3	13.3	11.9	(2.9)	(3.1)	(3.3)	-	-	-	10%	13%
Visa Inc.	V	Buy*	192,116	26.6	23.0	NA	17.0	14.9	6.6	6.4	NA	24%	28%	NA	NA		
MasterCard Inc.	MA	Buy	107,252	26.4	22.2	19.1	17.0	14.5	12.7	23.1	33.8	49.7	75%	121%	205%	12%	13%
Global Payments Inc.	GPN	Neutral	9,941	22.5	18.6	NA	13.9	10.9	(8.4)	(14.6)	NA	-	-	-	NA	NA	
Total System Services Inc.	TSS	Sell	9,847	19.1	17.0	15.1	12.2	10.5	9.2	4.6	3.9	3.3	18%	18%	18%	11%	12%
Global median				23.1	21.0	18.9	14.2	12.9	11.7	6.6	5.8	5.0	33%	32%	32%	10%	12%
Total global median				23.1	21.0	18.9	14.0	12.8	11.3	6.5	5.5	4.7	27%	32%	30%	10%	13%
Credit agency																	
Equifax Inc.	EFX	Neutral	14,812	33.2	28.1	24.4	15.8	13.6	11.9	5.3	5.0	4.5	18%	19%	20%	12%	16%
Experian	EXPN.L	Neutral	18,275	19.9	19.0	17.6	12.1	11.2	10.2	6.6	5.8	5.0	33%	32%	31%	6%	7%
Global median				24.3	21.9	21.1	14.0	12.6	11.9	5.3	5.0	4.5	18%	19%	20%	6%	7%
ERP & CRM																	
Oracle Corp.	ORCL	Buy*	170,793	17.9	15.7	NA	8.9	7.8	3.5	3.2	NA	24%	25%	NA	NA		
Salesforce.com Inc.	CRM	Buy*	58,429	NA	276.4	141.1	26.3	19.8	14.5	9.3	7.6	6.2	12%	14%	15%	27%	38%
SAP	SAP	Buy	96,451	22.0	19.4	17.2	13.8	12.5	11.3	3.2	2.9	2.6	16%	15%	16%	9%	11%
Intuit Inc.	INTU	Buy	28,004	29.1	26.5	NA	14.7	12.3	20.7	15.6	NA	65%	78%	NA	NA		
Global median				22.0	23.0	79.2	14.2	12.4	12.9	6.4	5.4	4.4	20%	20%	15%	18%	24%
Financials solutions																	
Fidelity National Information Services	FIS	Buy*	24,093	19.4	16.4	14.4	11.4	10.2	9.2	2.4	2.2	2.0	9%	12%	12%	9%	15%
Fiserv Inc.	FISV	Neutral	23,637	23.1	21.0	18.9	13.7	12.5	11.3	8.5	7.8	7.0	35%	33%	33%	6%	7%
SS&C Technologies Holdings Inc	SSNC.US	Not covered	6,199	18.9	15.7	14.2	14.3	12.3	10.9	2.6	2.3	2.1	15%	15%	15%	-	-
Temenos	TEMN.S	Neutral	3,805	36.9	27.7	22.4	17.8	15.0	13.0	10.1	9.0	7.9	28%	34%	37%	14%	26%
ExlService Holdings Inc	EXLS.US	Not covered	1,705	21.8	19.3	16.6	12.1	10.5	NA	3.7	3.1	NA	15%	14%	N/A	-	-
Silverlake Axis Ltd	SILV.SP	Not covered	954	4.5	4.4	3.7	11.8	11.2	9.6	1.8	1.7	1.9	42%	42%	46%	-	-
Oracle Financial Services Soft	OFSS.IN	Not covered	4,306	22.8	21.3	17.9	14.5	13.3	11.9	6.4	5.9	5.4	30%	29%	30%	-	-
ACI Worldwide Inc	ACIW.US	Not covered	2,324	30.9	28.1	NA	11.3	10.4	NA	2.6	2.3	NA	18%	N/A	N/A	-	-
Jack Henry & Associates Inc	JKHY.US	Not covered	6,597	29.0	26.9	24.0	14.2	13.4	12.3	NA	NA	NA	23%	22%	N/A	-	-
Global median				22.8	21.0	17.3	13.7	12.3	11.3	3.1	2.7	3.7	23%	25%	31%	-	-
Navigation																	
Garmin Ltd.	GRMN	Neutral	7,831	17.8	17.2	15.9	9.0	8.7	8.0	2.2	2.2	2.2	13%	13%	14%	4%	5%
TomTom NV	TMOAF.US	Not covered	2,025	36.5	27.4	20.8	12.8	11.0	9.3	2.0	1.9	1.8	4%	6%	8%	-	-
Global median				27.2	22.3	18.4	10.9	9.8	8.6	2.1	2.1	2.0	9%	10%	11%	2%	2%
Speech recognition																	
Nuance Communications Inc	NUAN.US	Not covered	4,649	10.9	10.0	9.4	10.3	10.5	NA	2.6	2.5	2.3	18%	20%	24%	-	-
Global median				10.9	10.0	9.4	10.3	10.5	NA	2.6	2.5	2.3	18%	20%	24%	NA	-
Global average				23.5	29.8	21.9	15.0	13.7	11.3	7.5	6.3	6.1	24%	31%	35%	10%	14%
Global median				22.8	21.0	17.9	13.8	12.4	11.3	5.3	4.2	4.5	21%	25%	24%	9%	10%
Selected global peers				26.3	26.5	18.7	14.7	12.5	11.1	5.4	4.2	3.1	16%	15%	13%	20%	

* denotes Conviction List. R.S. = Rating Suspended – estimates for these companies and those not covered are based on Bloomberg consensus.

Source: Bloomberg, Gao Hua Securities Research, Goldman Sachs Global Investment Research.

Risks: Slower monetization, aggressive SG&A spending continues

We forecast iFLYTEK's **SG&A ratio** to decrease from 39% in 2015 to 33% in 2020 despite positive yoy growth for SG&A expenses in absolute terms (5-year CAGR of 22% for 2016-2020). Due to the low visibility for the next three quarters, we see downside risks that management may need to continue its aggressive SG&A spending strategy, resulting in higher-than-expected SG&A ratio.

iFLYTEK's **operating cash flow/sales** ratio fell from 23.7% in 2014 to 20.6% in 2015. We expect the ratio to recover as new innovative products help the company to monetize its R&D in speech recognition and artificial intelligence. We acknowledge downside risks that monetization process turns out slower than expected, resulting in a slower recovery of the ratio.

Exhibit 8: iFLYTEK's operating cash flow/sales ratio deteriorated in 2015 but we expect the company's ability to monetize its technology to improve it
iFLYTEK operating cash flow/sales ratio

	2013	2014	2015	2016E	2017E	2018E	2019E	2020E
Revenue (Rmb mn)	1,254	1,775	2,501	3,731	5,530	7,421	9,286	10,861
yoY(%)		42%	41%	49%	48%	34%	25%	17%
Operating cash flow (Rmb mn)	296	420	516	716	1,156	1,787	2,515	3,301
yoY(%)		42%	23%	39%	61%	55%	41%	31%
Operating CF as % of sales revenue	24%	24%	21%	19%	21%	24%	27%	30%

Source: Company Data, Gao Hua Securities Research.

信息披露附录

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每项指标的准确计算方式可能随着财务年度、行业和所属地区的不同而有所变化, 但标准方法如下:

增长是下一年预测与当前年度预测的综合比较, 如每股盈利、EBITDA 和收入等。**回报**是各项资本回报指标一年预测的加总, 如 CROCI、平均运用资本回报率和净资产回报率。**估值倍数**根据一年预期估值比率综合计算, 如市盈率、股息收益率、EV/FCF、EV/EBITDA、EV/DACF、市净率。**波动性**根据 12 个月的历史波动性计算并经股息调整。

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信息披露

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金俊: 中国科技行业。

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