Chinasoft Intl

HK$6.01 - BUY

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China
Technology

Reuters	0354.HK
Bloomberg	354 HK
Priced on 27 April 2022	
HS CEI @ 6,786.0	
12M hi/lo	HK$16.02/5.45
12M price target	HK$10.00
±% potential	+66%
Shares in issue	3,065.6m
Free float (est.)	87.6%
Market cap	US$2.3bn
3M ADV	US$13.7m

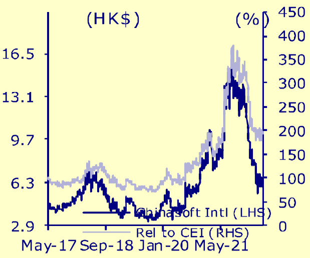
Major shareholders
Yuhong Chen 12.4%
UBS Group 10.0%

Blended ESG Score (%)*	
Overall	65.3
Country average	65.0
GEM sector average	73.6

*Click to visit company page on clsa.com for details

Stock performance (%)

	1M	3M	12M
Absolute	(9.6)	(23.1)	(33.5)
Relative	(3.0)	(6.1)	7.6
Abs (US$)	(9.9)	(23.7)	(34.2)



Source: Bloomberg

Initiating coverage

Digitalisation play

Soaring on the winds of digital transformation

Chinasoft Intl is a comprehensive IT services provider with expertise to provide 'end-to-end' IT solutions for large customers. We see the demand for IT services rising amid policy support for digitalising the economy. The company is now spending more resources on emerging business and Huawei's software ecosystem initiatives. We expect policy tailwinds on digitalisation and rising cloud usage to support top- and bottom-line Cagrs of 21% and 29% over 2022-24. We initiate coverage with a BUY and a HK$10.00 target based on 14.5x 23CL PE.

An all-around IT services provider

Chinasoft Intl (CSI) is a comprehensive IT services provider with solid experience in IT consulting, design, implementation and digital transformation, offering 'end-to-end' IT services to global customers in area such as IT solutions, cloud management, big data management and other new technologies. According to Gartner, the company is now a Top-100 (80th in 2021) IT services company in the world. Huawei is its largest customer (53% of revenue), followed by HSBC (6%) and Tencent (4%).

Digitalisation is the trend

Policy support for digitalising the society and economy have been rolling out in the past few years, along with the concept of 'Information Innovation' and 'domestic substitution.' Against this backdrop, the demand for upgrading IT software and devices should increase, while the need for IT services should go up as well due to the more-complicated IT environment during the digital transformation process (multi-cloud, big data, IoT, etc.).

Focuses are emerging business and diversifying customer portfolio

CSI is expanding in emerging businesses such as cloud management services, big data management and Huawei's software ecosystem initiatives. CSI is also diversifying to more key accounts such as Tencent and Alibaba to sustain top-line growth, amid near-term pressure on Huawei's business. We expect Huawei's revenue contribution to drop to 50% in 2022 and revenue from non-Huawei customers to grow at a Cagr of 27% during 2022-24.

A steady top- and -bottom-line outlook; initiate with BUY

We expect the company to deliver top-line and bottom-line Cagrs of 21% and 29% over 2022-24, supported mainly by policy tailwinds on digitalising the economy and rising cloud usage. We initiate coverage of Chinasoft Intl with a BUY rating and a price target of HK$10.00 based on 14.5x 23CL PE. The stock is trading at 9.0x 23CL PE (50% discount to its major domestic and global peers and 38% discount to its 10-year trading average). We believe this offers a good entry point to visit the stock.

Financials

Year to 31 December	20A	21A	22CL	23CL	24CL
Revenue (Rmbm)	14,101	18,398	22,588	27,707	33,248
Net profit (Rmbm)	955	1,137	1,309	1,705	2,185
EPS (Rmb)	0.34	0.38	0.43	0.56	0.71
CL/consensus (11) (EPS%)	-	-	97	101	103
EPS growth (% YoY)	20.6	12.5	11.2	30.3	28.2
PE (x)	15.7	13.0	11.7	9.0	7.0
Dividend yield (%)	0.4	0.5	0.5	0.7	0.9
FCF yield (%)	6.6	0.4	4.4	5.5	8.3
PB (x)	1.7	1.3	1.2	1.1	0.9
ROE (%)	12.5	11.2	10.9	12.9	14.5
Net debt/equity (%)	(22.8)	(31.1)	(29.9)	(31.7)	(34.8)

Source: www.clsa.com

 For important disclosures please refer to page 52.

evalu@tor The Global Equities Database

Financials at a glance

Year to 31 December	2020A	2021A	2022CL	(% YoY)	2023CL	2024CL
Profit & Loss (Rmbm)						
Revenue	**14,101**	**18,398**	**22,588**	*22.8*	**27,707**	**33,248**
Cogs (ex-D&A)	(9,654)	(13,262)	(16,367)		(19,885)	(23,731)
Gross Profit (ex-D&A)	**4,448**	**5,136**	**6,221**	*21.1*	**7,822**	**9,517**
SG&A and other expenses	(2,962)	(3,948)	(4,735)		(5,752)	(6,836)
Op Ebitda	**1,486**	**1,188**	**1,487**	*25.2*	**2,070**	**2,681**
Depreciation/amortisation	(329)	(232)	(313)		(354)	(388)
Op Ebit	**1,157**	**956**	**1,173**	*22.8*	**1,716**	**2,292**
Net interest inc/(exp)	(76)	(100)	(63)		(59)	(56)
Other non-Op items	(46)	396	309	*(21.9)*	197	144
Profit before tax	**1,035**	**1,252**	**1,419**	*13.4*	**1,854**	**2,381**
Taxation	(87)	(115)	(108)		(145)	(191)
Profit after tax	**948**	**1,137**	**1,311**	*15.3*	**1,708**	**2,190**
Minority interest	7	0	(3)		(3)	(4)
Net profit	**955**	**1,137**	**1,309**	*15.1*	**1,705**	**2,185**
Adjusted profit	**955**	**1,137**	**1,309**	*15.1*	**1,705**	**2,185**
Cashflow (Rmbm)	**2020A**	**2021A**	**2022CL**	***(% YoY)***	**2023CL**	**2024CL**
Operating profit	**1,157**	**956**	**1,173**	*22.8*	**1,716**	**2,292**
Depreciation/amortisation	329	232	313	*35*	354	388
Working capital changes	(533)	(668)	(411)		(652)	(711)
Other items	200	481	201	*(58.2)*	44	(67)
Net operating cashflow	**1,153**	**1,001**	**1,276**	*27.5*	**1,462**	**1,902**
Capital expenditure	(163)	(936)	(602)		(612)	(631)
Free cashflow	**990**	**65**	**674**	*935.6*	**850**	**1,271**
M&A/Others	(29)	(121)	59		67	79
Net investing cashflow	**(192)**	**(1,057)**	**(543)**		**(545)**	**(552)**
Increase in loans	217	549	0		0	0
Dividends	(52)	0	0		0	0
Net equity raised/other	196	1,338	(568)		(119)	(115)
Net financing cashflow	**362**	**1,887**	**(568)**		**(119)**	**(115)**
Incr/(decr) in net cash	1,323	1,831	165	*(91)*	798	1,236
Exch rate movements	(62)	(62)	(62)		(62)	(62)
Balance sheet (Rmbm)	**2020A**	**2021A**	**2022CL**	***(% YoY)***	**2023CL**	**2024CL**
Cash & equivalents	3,787	5,556	5,660	*1.9*	6,396	7,571
Accounts receivable	4,580	5,894	6,762	*14.7*	7,711	8,760
Other current assets	2,027	2,069	2,172	*5*	2,474	2,776
Fixed assets	858	1,220	1,388	*13.7*	1,535	1,651
Investments	247	385	385	*0*	385	385
Intangible assets	1,086	1,037	1,063	*2.6*	1,102	1,150
Other non-current assets	502	741	836	*12.8*	908	988
Total assets	**13,087**	**16,902**	**18,265**	***8.1***	**20,511**	**23,280**
Short-term debt	368	917	917	*0*	917	917
Accounts payable	1,753	2,252	2,693	*19.6*	3,141	3,604
Other current liabs	597	817	934	*14.3*	1,085	1,263
Long-term debt/CBs	1,421	1,021	1,021	*0*	1,021	1,021
Provisions/other LT liabs	171	269	269	*0*	269	269
Shareholder funds	8,753	11,604	12,405	*6.9*	14,049	16,173
Minorities/other equity	23	23	25	*11.3*	29	33
Total liabs & equity	**13,087**	**16,902**	**18,265**	***8.1***	**20,511**	**23,280**
Ratio analysis	**2020A**	**2021A**	**2022CL**	***(% YoY)***	**2023CL**	**2024CL**
Revenue growth (% YoY)	17.1	30.5	22.8		22.7	20.0
Ebitda margin (%)	10.5	6.5	6.6		7.5	8.1
Ebit margin (%)	8.2	5.2	5.2		6.2	6.9
Net profit growth (%)	26.5	19.1	15.1		30.3	28.2
Op cashflow growth (% YoY)	52.8	(13.2)	27.5		14.5	30.1
Capex/sales (%)	1.2	5.1	2.7		2.2	1.9
Net debt/equity (%)	(22.8)	(31.1)	(29.9)		(31.7)	(34.8)
Net debt/Ebitda (x)	-	-	-		-	-
ROE (%)	12.5	11.2	10.9		12.9	14.5
ROIC (%)	16.2	11.9	13.1		17.5	21.1

Source: www.clsa.com

Executive summary

'Focus on hardware, but weight less on software' ("重硬轻软") was often used to describe the unbalanced development of China's technology industry in the past. However, we see strong resolution by the government to rectify this phenomenon in the 14th Five-year-Plan (2021-25) and recent policy series, which greatly stress the importance of digitalising the economy and strengthened the applications of information technology. Chinasoft Intl is one of the leading IT services company in China, offering 'end-to-end' IT services to global customers, including Huawei, HSBC and Tencent. The share repurchase plan (up to 10% of share capital) announced by the company on 11 Apr 2022 reflects management's confidence in the company's long-term business development. We initiate coverage of Chinasoft Intl with a BUY rating at a target price of HK$10.00.

Investment thesis 1: Acceleration of digitalisation trend

Compared with the global market, China is still a laggard in IT services. Looking at IT services spending as percentage of total IT spending, there was a notable gap between China (14.7%) and the global market (28.0%) in 2021. However, with the policy support for digitalising China's economy and a more complicated IT environment, we think there is a clear trend for China to narrow the gap on IT services spending with the rest of the world, supported by Gartner's forecasts.

Investment thesis 2: Leading position in managed cloud services

According to IDC, along with the rising cloud usage, multi-cloud and hybrid cloud is the key trend for enterprises now to hedge the risk of using single cloud. However, this often creates a burden for enterprises as the setup (deployment, migration, maintenance, etc.) involves IT specialties. This gives rise to the need for third-party cloud management companies. Chinasoft Intl is now the second-largest third-party cloud management provider in China (6.8% market share), and the largest cloud deployment and cloud migration player in China.

Investment thesis 3: High-quality client base; 'key account' strategy

CSI uses the 'key account' strategy (focus on large clients) to expand the business. KAs, usually multinational corporates, often have a stronger and more stable demand for IT services, and costs for these KAs to switch to other IT vendors is usually high. Huawei is now CSI's major customer (53% of revenue), and we understand that the company is also focusing resources on other KAs to sustain healthy top-line growth amid near-term pressure on Huawei's business.

Investment thesis 4: Soaring with Huawei's HarmonyOS

HarmonyOS is Huawei's key product to achieve its ambition to create a complete IoT ecosystem, and especially critical given that sanctions from the US are affecting its consumer hardware business. CSI is a core partner in developing the HarmonyOS ecosystem for Huawei. Management mentioned that CSI has around 60%+ share of Huawei's budget on HarmonyOS R&D outsourcing and middleware development.

Financials and valuation

We expect CSI to grow revenue by 23%/23%/20% in 2022-24. Growth momentum should continue in the medium term, translating into a top-line Cagr of 17% over 2023-26; we estimate the firm's bottom-line to grow by 15%/30%/28% in 2022-24, and project a medium-term Cagr of 25% over 2023-26. We initiate coverage of Chinasoft Intl with a BUY rating and a price target of HK$10.00 based on 14.5x 23CL PE. The stock is trading at 9.0x PE 23CL (at a 50% discount to its major domestic and global peers and a 38% discount to its 10-year trading average).

Business overview

CSI is a comprehensive IT services provider

Founded in 2000, Chinasoft Intl has accumulated 20+ years of industry resources and IT service know-how through various projects for clients ranging from public institutions to private companies across different industries. The company is now a comprehensive IT services provider with solid experience in consulting, design, implementation and digital transformation, offering 'end-to-end' IT services to global customers, including Huawei, Tencent and HSBC in areas such as IT solutions, cloud management, big data management and other new technologies. According to Gartner, the company is now a Top-100 (ranked 80th in 2021) IT services company in the world. There are two types of IT services that CSI provide for its clients – 1) Fundamental IT services and 2) Cloud intelligent services (sometimes called emerging business).

Fundamental IT services is its traditional business line with 71% of revenue

Fundamental IT services mainly includes traditional IT outsourcing services and solutions for large corporates. Services include consultation, solution implementation, software development, maintenance services, etc. This business line is the major source of revenue and profit; it contributed around 71% of the top line in FY21. As this business unit is relatively mature - it was CSI's founding business line and has been around since 2000 - we see slower revenue Cagr of around 13% for 2018-21.

Cloud intelligent services is CSI's key revenue growth driver

Cloud intelligent services, or CIG, aims to provide emerging types of IT services, including comprehensive cloud management service, big data management and an IT crowdsourcing platform – Jointforce. Thanks to strong cloud usage and benefit of growing from a low-base, CSI's cloud intelligent business shows faster top-line growth than fundamental IT services. In 2021, cloud intelligent services contributed 29% of total revenue, yielding a revenue Cagr of 49% during 2018-21.

Figure 1

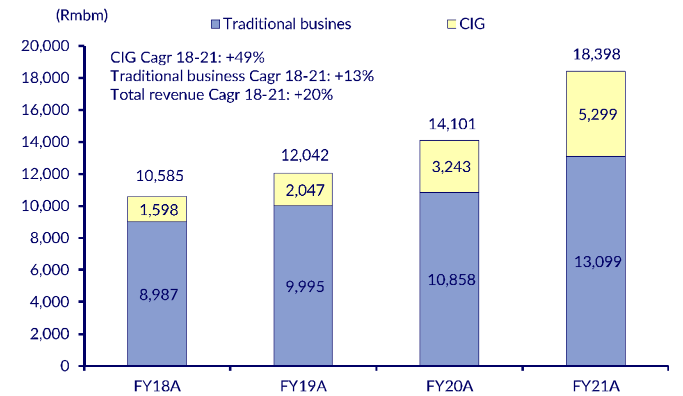
Chinasoft Intl's key businesses

	2018-21 Cagr	FY21 revenue proportion	Major products / services	Major clients
Fundamental IT services	13%	71%	IT outsourcing and solutions	Huawei, HSBC, Tencent, Alibaba, Honour, China Mobile, China Telecommunications, etc.
Cloud Intelligent services (CIG)	49%	29%	Managed cloud services, big data management, Jointforce platform, etc.	Huawei; other clients such as HSBC and Ping An also have demand for cloud intelligent services

Source: CLSA, Chinasoft Intl

Figure 2

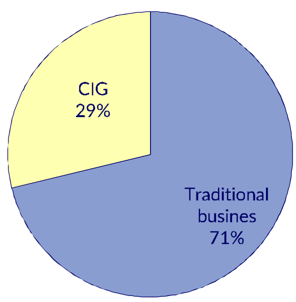
Revenue and revenue growth, 2018-21



Source: CLSA, Chinasoft Intl

Figure 3

Revenue contribution, 2021



Source: CLSA, Chinasoft Intl

Fundamental IT services group offers comprehensive IT solutions for customers

Fundamental IT services: A stable income flow

Fundamental IT service group mainly provides IT services and industrial digitalisation solutions to different corporates, based on its self-developed software platform and through the well-trained project- management skills and human resources capabilities of the company. Below are shown the key service types Chinasoft Intl offers to its customers and the company capabilities for offering such services.

Figure 4

Types of fundamental IT services (partial)

Service type	Scope	Capability	Note
IT consulting	1) Technical consultancy, strategy and operation, business transformation	1) Rich know-how in various industries; learning from Huawei	1) Small revenue proportion
Application development	1) Full-stack services: system, platform and APP development; project customisation 2) Covers sectors such as financial, Internet and high-tech, telecommunications, retail and ecommerce 3) Covers all stages of the development process including demand analysis, design, coding, testing, deployment and post-implementation support.	1) Certified by: CMMI Level 5 2) ISO9001 quality management system 3) ISO20000 IT service management system 4) ISO27001 information security management system	1) Stable and long-term end-to-end application software development and maintenance services for Fortune 500 customers 2) Mature onshore and offshore delivery model
IT management service	1) Full-chain operation and maintenance services in finance, high-tech, government, manufacturing, telecommunications, etc. 2) Management service platform capability in traditional application development management (ADM), application operation (AO), infrastructure operation (IO), technical support, communication technology, digitalisation (cloud computing migration, software-as-a-service 'SaaS'), big data, business intelligence, human resources and training	1) AO capability: 24x7 monitoring solution; preventive maintenance, flexible configuration management and process efficiency improvement.	1) Contract management based on SOW (statement Of work), customised SLA (service-level agreement), and complete ecological resources 2) 22 offshore and onshore delivery centres worldwide
Product engineering	1) Product design, software and hardware engineering, product testing and inspection, product lifecycle management	1) Reduce product development time and cost; improve quality and production processes	
Test service	1) Full-stack testing services: test consulting, solution customisation, system construction, project implementation, tool selection, platform test, training 2) Covers telecommunications, government, manufacturing, finance, public services, energy, etc.	1) Focus on the research and development of independent test systems and tools.	
Software platform	1) R&D of platform and middleware	1) Three software platform products with independent intellectual property rights	
Flow outsource and training	1) Business analysis, process design, system development and training, etc.	1) 26 years of experience in business process outsourcing	

Source: CLSA, Chinasoft Intl

Huawei is the largest customer for CSI's fundamental IT services group

CSI did not disclose revenue proportion by customer within the fundamental IT business group, but we understand from the company that fundamental IT services' largest customer is Huawei. According to management, around 55-60% of Huawei's outsourcing projects go to CSI. As such, the company ranked first in Huawei's supplier evaluation for the past six years.

CSI is the second-largest IT outsourcing supplier in the world

Following Huawei, fundamental IT services' second-largest customer is HSBC. The company provides HSBC with financial IT outsourcing services. Currently, CSI is the only Chinese supplier among HSBC's six major suppliers, and also the second-largest IT outsourcing supplier in the world.

CSI is also building relationships with other multinational corporates and the Chinese government

The company is also leveraging its know-how and IT service experience to gain the trust of other multinational corporates, including Tencent, AIA and China Mobile etc. It is noteworthy that CSI also has a working relationship with the government, and had successfully launched different government IT projects in area such as airports, internal auditing systems, traffic controls, etc.

Cloud intelligent services: Changing the game, compete to win

CSI began to explore the emerging business back in the early 2010s

As early as the 2010s, the company started exploring cloud management services (or managed cloud services) and thinking of ways to leverage its expertise in traditional IT services through 'platform' services instead of purely point-to-point services, following its solid experience in IT outsourcing services, cooperation with leading corporates and R&D.

Three key services and products in cloud intelligent services

Against this backdrop, CSI began to shift more R&D focus and resources into cloud intelligent services. Currently, there are three major types of services and products under the cloud intelligent services group – 1) managed cloud services; 2) big data management and 3) Jointforce platform.

1. Managed cloud services

Definition of managed cloud services

By definition, managed cloud services are services that offer partial or complete management of a vendor's cloud resources or infrastructure. Management responsibilities include but are not limited to deployment, migration, configuration, optimisation, security, maintenance, etc.

CSI sees 'cloudification' as the growing trend

Chinasoft Intl understand that 'cloudification' is a core theme for digital transformation of the society. However, some enterprises (mainly traditional ones) still lack the expertise and the R&D budget to utilise and operate cloud functions. As a result, Chinasoft has increased investment in cloud management services and leveraged it close partnership with Huawei Cloud and working relationship with other cloud vendors like Tencent Cloud and China Mobile Cloud to consolidate and strengthen its multi-cloud management service capabilities to create a foundation for enterprises to digitalise their businesses. This led the company to rank in the Top-3, in terms of market share, in the Chinese cloud management services market, according to IDC.

Two new and key products for the cloud business

In the past two years, the company launched two new products to upgrade its managed cloud services – 1) CloudEasy and 2) Huaxia Cloud. Besides these two key products, CSI also owns multiple cloud solutions and offers tailor-made cloud management services to cater to the needs of different customers with the aim of improving their efficiency and helping their clients digitalise their businesses through cloud technology.

1.1 CloudEasy product

The CloudEasy platform from CSI

CloudEasy is a cloud management platform designed by the company. The platform incorporates three sub-CloudEasy products, namely CloudEasy CBP (Cloud Business Platform), CloudEasy CMP (Cloud Management Platform) and CloudEasy CAP (Cloud Application Platform) to deliver together a full stack of cloud solutions to enterprises (users) from cloud migration to cloud functions and support for multi-cloud management services.

CSI has a close partnership with Huawei Cloud

Chinasoft Intl has been Huawei Cloud's highest-level partner since 2017, thus the company first directs users to deploy on Huawei Cloud if they have no specific preference of cloud vendor.

CloudEasy is today most popular with large enterprises

According to management, CloudEasy users are mostly large corporates that are also using CSI's fundamental IT services, like China Mobile, Ping An and government bodies. But the aim is to get more 'long-tail' customers on board with CloudEasy and thus further integrate Huawei Cloud with more enterprises.

Figure 5

CloudEasy main products

Products	Function	Effects	User cases (Example)
CloudEasy CBP	Provide a one-stop cloud business operation capabilities, such as product launch, marketing promotion, purchase, transaction and delivery after-sales services.	1) Shorten cloud resource provision time, billing time and cloud business time-to-market time	1) Dongying Industrial Internet 2) Guizhou Innovation Centre
CloudEasy CMP	Provide one-stop multi-cloud management services such as cloud management, cloud monitoring, cloud operation and maintenance and cloud security.	1) Increased management efficiency by 80% 2) Provides 20+ cost optimisation strategies	1) Guizhou Cloud
CloudEasy CAP	Provide application development, data analytics, continuous delivery, service governance, capability opening and other application functions	1) Shorten software development cycle by 50% 2) Increase development efficiency by 10 times	1) Shenzhen Longgang Political and Digital Bureau 2) China Mobile

Source: CLSA, Chinasoft Intl

Huaxia Cloud is a cloud brokerage platform

1.2 Huaxia Cloud ("华夏云网") product

Huaxia Cloud is a proprietary 'one-stop' cloud brokerage platform designed by Chinasoft Intl. It offers multiple cloud solutions on the platform from partners such as Huawei Cloud and Tencent Cloud. Cloud solutions available on the platform include business activity management (BAM), work flow management, human resource management, document management, etc.

It targets SME customers

The company serves as an intermediary to provide different value-added services through the entire process (from pre-sales to after-sales) to satisfy different demands from users. This platform works particularly well for small and medium-sized enterprises (SMEs) as most have limited budgets for R&D, yet they understand that 'cloudification' is a way for their business to save money.

Figure 6

Interface of Huaxia Cloud platform

Source: CLSA, Chinasoft Intl

Figure 7

Partnership with multiple cloud vendors

Source: CLSA, Chinasoft Intl

Big data management is another focus for business under cloud intelligent services

2. Big data management services

According to Chinasoft Intl, big data management is another service on which it is focusing amid acceleration of digitalising the economy. Similar to fundamental IT services, CSI offers big data management services through the entire cycle from consultation and implementation to back-end data asset management.

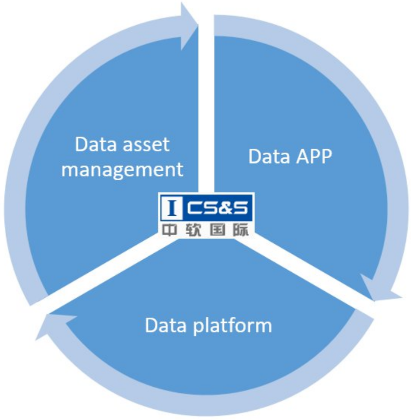
Enterprises in the financial industry make up the majority of customers for big data management

Currently, customers from the financial industry are the key users of big data management services, though we see more transportation companies and government bodies starting to engage Chinasoft Intl for big data management services. The company's ambition is to go beyond the financial industry and expand in strategic and emerging fields such as government affairs, real estate, railways and environmental protection.

A comprehensive big data management service circle

Figure 8

Comprehensive big data management services



Source: CLSA, Chinasoft Intl

3. Jointforce platform

Jointforce is an IT crowdsourcing platform

Jointforce is an online IT crowdsourcing platform that provides online transaction services by matching, coordinating and guaranteeing service providers (contracting companies) and engineers stationed on the platform to provide quality IT services to customers. Jointforce's target customer group is mainly SMEs - the company sees them as 'long-tail' customers – with the key partner being the government.

The aim is to connect demand and supply

The concept of Jointforce is simple – to connect demand for IT services with the best-fit suppliers. It promotes accurate and fast matching of the software supply and demand sides, introduces software asset management capabilities and tries to solve the problem of a fragmented IT services market in China. There are more than 63,000 registered IT vendors on the platform with 474,000+ IT engineers.

Three sub-platforms in Jointforce

Currently, the ecosystem of Jointforce consists of three sections or sub-platforms – 1) Cloud Integrative Service (云集); 2) Plan Z and 3) Cloud Software Park. According to management, Jointforce successfully covers 70+ key cities , and the coverage of first-tier cities has reached 89%. Some 23 city governments have signed strategic cooperation agreements with Chinasoft Intl.

The layout and achievements from Jointforce

Figure 9

Basic layout and achievements by Jointforce

Source: CLSA, Chinasoft Intl

Partnership with the government

3.1 Cloud Integrative Service

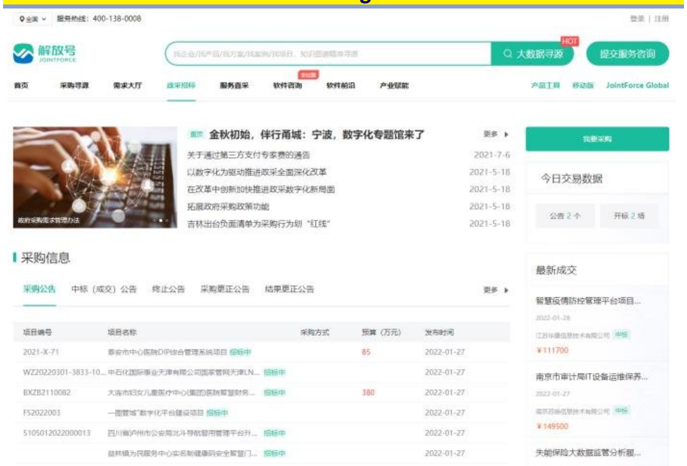
The Cloud Integrative Service platform is primarily designed to cater to demand from government bodies, and has already landed in 14 major cities in China. The platform will help match demand from government agencies with vendors of services. Leveraging Chinasoft Intl's expertise on IT consultation, services testing, procurement and process supervision, the Cloud Integrative Service platform can provide government IT service projects with the entire cycle and process, from tendering and bidding, project delivery, online software asset management service and quality control services.

CSI receives 2-10% commission from each successful project

This 'one-stop' service from the platform can help governments to shorten procurement cycles, standardise software asset management and improve delivery quality. As a result, Chinasoft Intl receives around a 2-10% commission fee from each successful project.

Figure 10

Interface of Jointforce – Cloud Integrative Services



Source: CLSA, Jointforce

Figure 11

Example of government services request on Jointforce

公告信息

所属品目：餐饮服务

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需求描述：

解放号网络科技有限公司（以下简称"解放号"）受南京鼓楼区卫生健康委员会（采购单位名称，以下简称"采购人"）委托，就南京市鼓楼区隔离点配餐保障服务（采购项目名称）进行询比采购，兹邀请符合资格条件的供应商提交响应文件。

1、项目编号：NJJF-202203236180

2、项目内容：鉴于南京市鼓楼区疫情防治需要，需为隔离酒店提供餐饮供应服务，本次采购需为隔离点提供早餐、午餐、晚餐，供应商应充分考虑餐饮搭配、营养均衡。本次采购餐饮服务隔离点服务区域为鼓楼区，具体数量视疫情情况确定，可参考2021年为3-21个。供应商应具备足够的餐饮服务能力及配送服务能力，详见招标文件。

3、项目预算：30万元，报价超过项目预算的为无效响应文件。

4、供应商应具备下列资格条件，并提供证明材料（包括但不限于）：

Source: CLSA, Jointforce

Plan Z targets manpower outsourcing

3.2 Plan Z

Plan Z is a manpower outsourcing service on the Jointforce platform. The service connects software vendors on the supply side (usually small IT outsourcing companies) and customers on the demand side (usually SME enterprises), responds quickly to solve the problems of flexible employment from the enterprise and optimise human resources, and precipitates outsourcing capabilities into human resources SaaS services.

Target to SME with urgent IT projects

The target customers for Plan Z services are mostly SMEs that face some ad hoc or urgent IT projects that need software experts or engineers. Chinasoft would then uses big data intelligence and knowledge map technology to provide accurate HR outsourcing services to these customers, picking mainly from the registered software vendors on the Jointforce platform. Meanwhile, Chinasoft Intl would act as an intermediary to provide training for the engineers, supervision and other HR-related services. Thus Chinasoft Intl would earn a certain commission fee from each project.

Jointforce Software Park trains the ISVs

3.3 Jointforce Software Park

Jointforce Software Park aims to build an ecosystem for independent software vendors (ISV) within the park (both the cloud park and physical park). Through training, the ISV in the park integrates big data and knowledge map technology that

CSI owns, and leveraging the partnership with the Huawei Kunpeng ecosystem, Jointforce Software Park empowers ISVs to 'cloudify' their businesses and products (ie, deploy and use more cloud services). The cloud park also pushes online business opportunities to ISVs in the park, and helps companies in the park to get market promotion. We view the Jointforce Software Park as an incubator for ISVs.

Helping local governments to digitalise the society

The setup of Jointforce Software Park is in line with the government's ambition to digitalise the society and improve the technology capability of small- to medium-sized IT vendors. Also, it helps to integrate the enterprises in the park to the Huawei Kunpeng ecosystem and other Huawei ecosystems. Currently, the company has launched Jointforce Software Park in 17 different cities, including Nanjing, Qingdao, Xi'an and Ningbo, and is working with local governments to improve the quality of ISVs in these cities. Chinasoft Intl mainly receives government subsidies to launch the parks, along with subscription fees from ISVs.

Figure 12

Interface of Jointforce Software Park - Xiamen

Source: CLSA, Jointforce

Figure 13

Example of ISVs in the Jointforce Software Park

Source: CLSA, Jointforce

Chinasoft Intl's other dimensions t

CSI also defines the business as TPG and IIG

Besides breaking down the business into types of services, the company also separates the business as Technical Professional Group (TPG) and Internet IT Service Group (IIG), mainly according to client group and services type. This is how the company discloses its revenue and segment results in the financial statement.

TPG and IIG have different customer groups

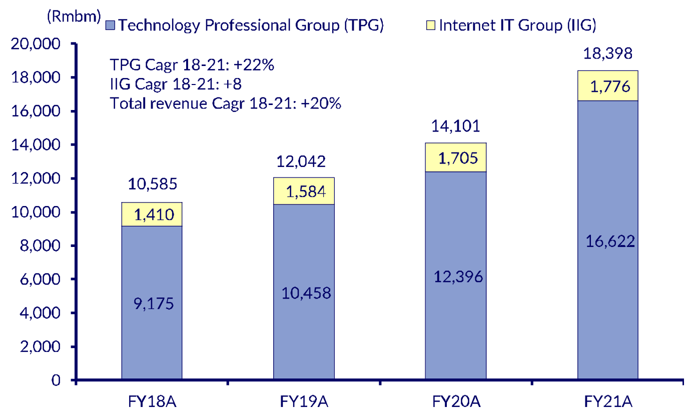
TPG provides development, solutions and IT outsourcing services for banks and other financial institutions, telecommunication carriers and other large-scale multinational companies, including sale of products; while IIG also offers development, solutions and IT outsourcing services, but for government, the tobacco industry and other small-scaled companies and training businesses, including sale of products.

Revenue Cagr 22% for TPG and 8% for IIG

Revenue from TPG surged from Rmb9,175m to Rmb16,622m from 2018 to 2021, representing a Cagr of 22% during the period, and accounting for 90% of revenue in 2021; while revenue from IIG showed a lower Cagr of 8% during 2018 to 2021, increasing from Rmb1,410m to Rmb1,776m. As CSI's strategy is still to focus on large clients, we predict that TPG will remain the key revenue contributor in the coming years.

Figure 14

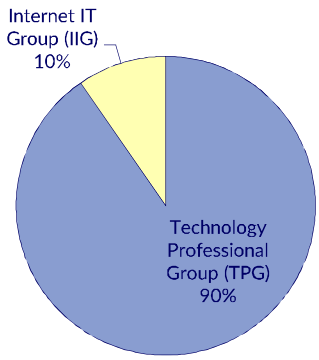
Revenue breakdown by business group, 2018-21



Source: CLSA, Chinasoft Intl

Figure 15

Revenue proportion by business group, 2018-21



Source: CLSA, Chinasoft Intl

CSI has trivial overseas business from Huawei

Chinasoft Intl is a leading IT services provider in China, and indeed over 95% of revenue has been generated domestically. That said, the company still has a minor portion of revenue in other regions. As early as 2005, Chinasoft Intl gained a foothold in Europe and the US market, despite a trivial amount of revenue. In 2011, the company leveraged the launching of Huawei products to successfully enter Singapore, Russia and some European countries.

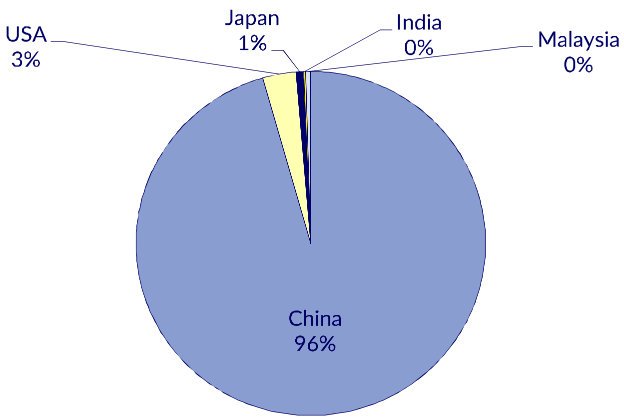
CSI can deploy more overseas businesses, leveraging the tailwind of "one-belt, one-road"

According to management, it doesn't neglect the opportunities to expand overseas, but China market will remain its near-term focus. The company believes it can leverage the tailwind of 'one-belt, one-road' to offer IT services to the countries under the scheme, together with other Chinese corporates such as Huawei, China Mobile, China Telecommunication and China Railway Construction; while CSI can also leverage existing global customers such as HSBC and Microsoft to horizontally expand CSI's offerings from China to other regions.

Ninety-six percent of revenue is from China

Figure 16

Revenue proportion by region, 2020



Source: CLSA, Chinasoft Intl

ResourceOne is the supporting platform designed by CSI

Chinasoft Intl's technology edges

As a pioneer in China's IT industry and one of the leaders in the IT services industry, the company has to maintain its technology edge to keep abreast of global and Chinese IT development trends. In the early 2000s, the company released its first self-owned platform – ResourceOne - which is a patented support platform to cover area such as development, integration and project engineering. In 2010, ResourceOne began to support cloud computing. In 2020, CSI also introduced 'Software Factory' to standardise experience, talent resources and project engineering by integrating tools and flow into the outsourcing service.

CSI has obtained 1,000+ software and solutions patents

With 20+ years of experience in developing its technology for IT services, the company owns 1,000+ software and solutions patents. On top of in-house R&D, the company also worked closely with leading technology and internet companies such as Huawei, Baidu and Alibaba to developing new types of technology capabilities including AI, smart vehicle, big data and more. For example, the company has formed a strategic partnership with Baidu, Alibaba and Tencent to deploy AI technology, specifically for image and voice recognition.

Partnering with Huawei helps technology advancement

That said, Huawei is still Chinasoft Intl's closest partner. As Huawei's highest-level partner, Chinasoft Intl has established the first joint-innovation laboratory with Huawei in 2016. Now the company is one of the main contributors to Huawei' cloud computing system, HarmonyOS, as well as its internet of thing (IoT) and internet of vehicles (IoV) systems. With the help of Huawei, CSI successfully launched new products like CloudEasy and Jointforce to sustain its business growth.

Figure 17

Technology milestones

Years	Company history
Before 2005	Released the ResourceOne V1.0 platform to support independent intellectual rights applications in 2000 Implemented V3.0 of the middleware platform ResourceOne, and popularised it in e-auditing industry
2010	ResourceOne began to support cloud computing
2012	CSI and Huawei jointly incorporated a high-tech park in Xi'an Signed strategic cooperation agreement with Ali Cloud to jointly develop PaaS platform and apply middleware from ResourceOne
2016	Established the big data joint-innovation laboratory with Huawei
2017	Signed a strategic cooperation agreement with Baidu to develop AI
2018	Cooperated with Nanjing Turing Artificial Intelligence Research Institute to build Jointforce Turing Research Institute
2019	Launched China Software Industry Big Data Platform CSI and Huawei jointly released financial big data intelligent application solution Signed a strategic cooperation agreement with Baidu IDG autonomous driving project
2020	Launched an IoV and HarmonyOS Innovation camp with Huawei in Zhengzhou and Wenzhou Launched the 'Software Factory' to standardise the business workflow and know-how
2021	Cooperated with Tsinghua University, GAC Zhilian and GAC Intelligent Control to explore IoV field

Source: CLSA, Chinasoft Intl

Figure 18

New technology capabilities

Field	Core Technology	Application	Strategic partner
AI	Bio/Image/Voice recognition	Anti-fraud; Intelligent voice robot; Intelligent marketing etc.	Huawei; Baidu; Alibaba etc.
Intelligent Manufacturing	Simulation	Cloud MES, Honeycomb	Bosch; Haier etc.
Blockchain	Data consensus; transaction traceability; asset securitisation; bill circulation etc.		CCB
5G	5G chip development; 5G base station testing; network planning; smartphone OS development, etc.		Telecom equipment supplier & operator
Cloud	Cloud backup, customised platform development; cloud maintenance	JF cloud disk, CloudEasy, BES Cloud apps development	Huawei cloud
Big Data	Big data platform; data governance; enterprise risk management etc.		Huawei, BATJ, Guizhou government

Source: CLSA, Chinasoft Intl

Overall, we think Chinasoft Intl owns three major technology edges that support the company's long-term growth – 1) Solid know-how and experience; 2) Improving technology with Huawei and 3) 'Digital Factory' to enhance efficiency.

1,000+ copyrights and patents on software and solutions

1. Solid know-how and experience

Currently, the company has over 1,000+ copyrights and patents on software and solutions. This is among the most across its peers. Chinasoft Intl also has more than 22 years of experience in the industry to offer IT outsourcing services in China. By leveraging its solid know-how and experience, the company is now servicing more than 17+ industries in China, according to management. This also helps Chinasoft Intl to smooth its emergence into new industries.

CSI shows competitiveness across peers

Compare with other peers who provide similar IT services, the company shows its competiveness in terms of accumulated customers and number of software and solutions patents and copyrights.

Figure 19

Comparison of technology know-how in terms of years of experience, accumulated customers and patents/copyrights

Company	Stock code	Years of establishment	Accumulated customers	No. of software and solutions patents/copyrights
Chinasoft Intl	354 HK	22	2,013	1,000+
iSoftStone	301236 SZ	17	1,000+	653
SIE Consulting	300687 SZ	17	1,000+	190
Digital China	000034 SZ	40	300+ customers on cloud	na
Hand Enterprises	300170 SZ	26	6,000+	176

Source: CLSA, Latest financial reports on respective companies

Partnering with Huawei can improve CSI's technology development

2. Improving its technology with Huawei

We have been stressing the CSI-Huawei partnership. Outside of revenue contribution, Huawei is also a key contributor to CSI's technology advancement. As mentioned above, Chinasoft Intl and Huawei have launched multiple laboratory and innovation centres on the topics of cloud computing, big data management and other technology advancements, leading to the joint development of technology for both Chinasoft Intl and Huawei.

CSI earned the expertise of HarmonyOS

Leveraging on Huawei's HarmonyOS ecosystem, Chinasoft Intl became one of the initial members of the working committee of Open Atom Open Source Foundation ("开放原子开源基金会") and Huawei's key ecology partner. This allowed the company to gain expertise on the source code and software development kit (SDK) of the HarmonyOS system, which allowed CSI to provide middleware and software modules to users, including smart device vendors (eg, home appliance players) who needed to develop their own operating system in their devices to work with the 'OpenHarmony' project initiated by Huawei and other members from the foundation.

Software Factory to standardise the services and know-how

3. Software Factory to enhance efficiency

In 2020, Chinasoft Intl initiated its Software Factory, primarily aimed at integrating consulting, diagnosis, process management, IT tools and delivery services to comprehensively upgrade traditional IT services. In other words, the company wanted to standardise services and improve efficiency while lowering costs.

Management indicated that the Software Factory is one of its very key tools to sustain margin improvement in the future while maintaining quality services to different customers.

2021 was a record-high year for software and IT services market revenue

Market overview: IT services in China

According to the Ministry of Industry and Information Technology (MIIT) in China, there are more than 40,000 software and IT services enterprises in China with total revenue of Rmb9,499bn in 2021, which was a record-high year. Of the total, IT services accounted for 63.5% followed by other software products at 25.7% and embedded software at 8.9%. The Cagr of software and IT services revenue during 2014-21 was 14.4%

Revenue for IT services grew steadily during 2019-21

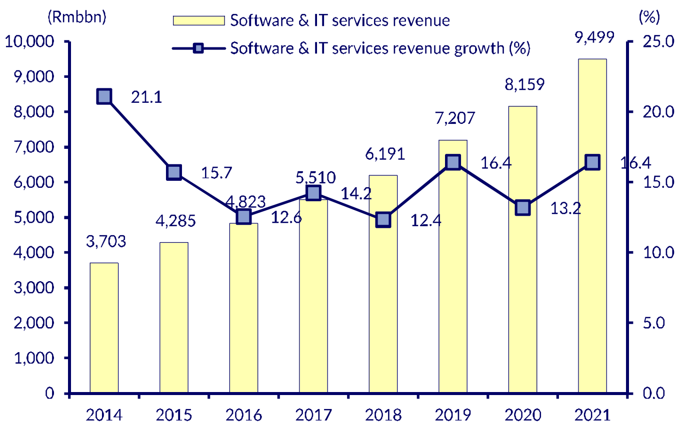
Despite some headwinds from Covid-19 in the past two years, IT services revenue still managed to grow steadily from Rmb4,257bn to Rmb6,031bn during 2019-21, representing a Cagr of 19.0%. Contribution of IT services revenue to total revenue also increased from 59.3% to 63.5% during the same period. Revenue contribution from IT services in China is on a substantial upward trend.

Net profit and revenue for software and IT services are on similar growth tracks

On the profitability side, MIIT data show that net profits from software and IT services enterprises are on a trend similar to the top-line growth. The Cagr of software and IT services net profit during 2014-21 was 13.7%. In 2021, the net profit of the segment reached Rmb1,188bn, which was also a record-high year and implied a net profit margin of 12.5%.

Figure 20

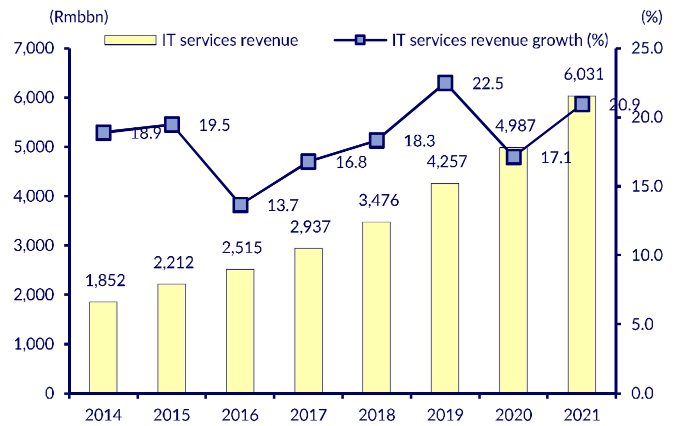
China software and IT services revenue from MIIT, 2014-21



Source: CLSA, MIIT

Figure 21

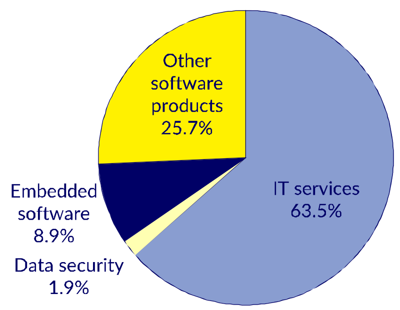
China IT services revenue from MIIT, 2014-21



Source: CLSA, MIIT

Figure 22

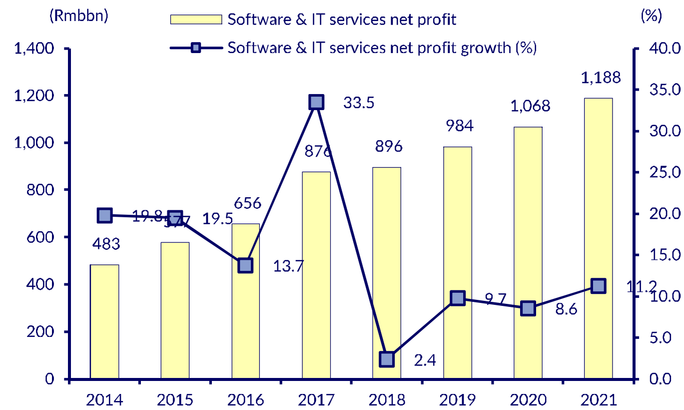
Breakdown of China software and IT services revenue, 2021



Source: CLSA, MIIT

Figure 23

China software and IT services net profit from MIIT, 2014-21



Source: CLSA, MIIT

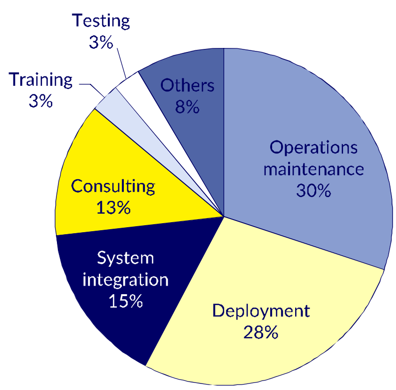
Upstream of IT services industry chain mainly consists of vendors of devices and value-added services

In China's IT services industry chain, **the upstream** is usually the traditional IT device vendors, mainly selling operations terminals and operations systems to enterprises. They do provide some sort of IT services. These upstream players include Lenovo, Huawei, HP, Microsoft and IBM. In China, though global players may still have an edge here and there in IT devices and operating systems, the trend of domestic substitution should allow domestic players like Huawei (Huawei Kunpeng and HarmonyOS) and Kylin (Kylin Operation System) to continue to grow. Value-added services such as system integration, development, maintenance and consulting are also important parts of the upstream. Players like Chinasoft Intl would provide such IT services, as it is almost impossible for IT device vendors to spend full effort to maintain the devices and digital architecture, which are usually complex and labor-intensive. According to estimates by iResearch, 30% of IT services go to operations maintenance, 28% go to deployment and 15% go to systems integration.

Operations maintenance is among the most popular IT services

Figure 24

Breakdown of IT services types in terms of market share, 2020



Source: CLSA, iResearch

Midstream usually consists of services related to SaaS

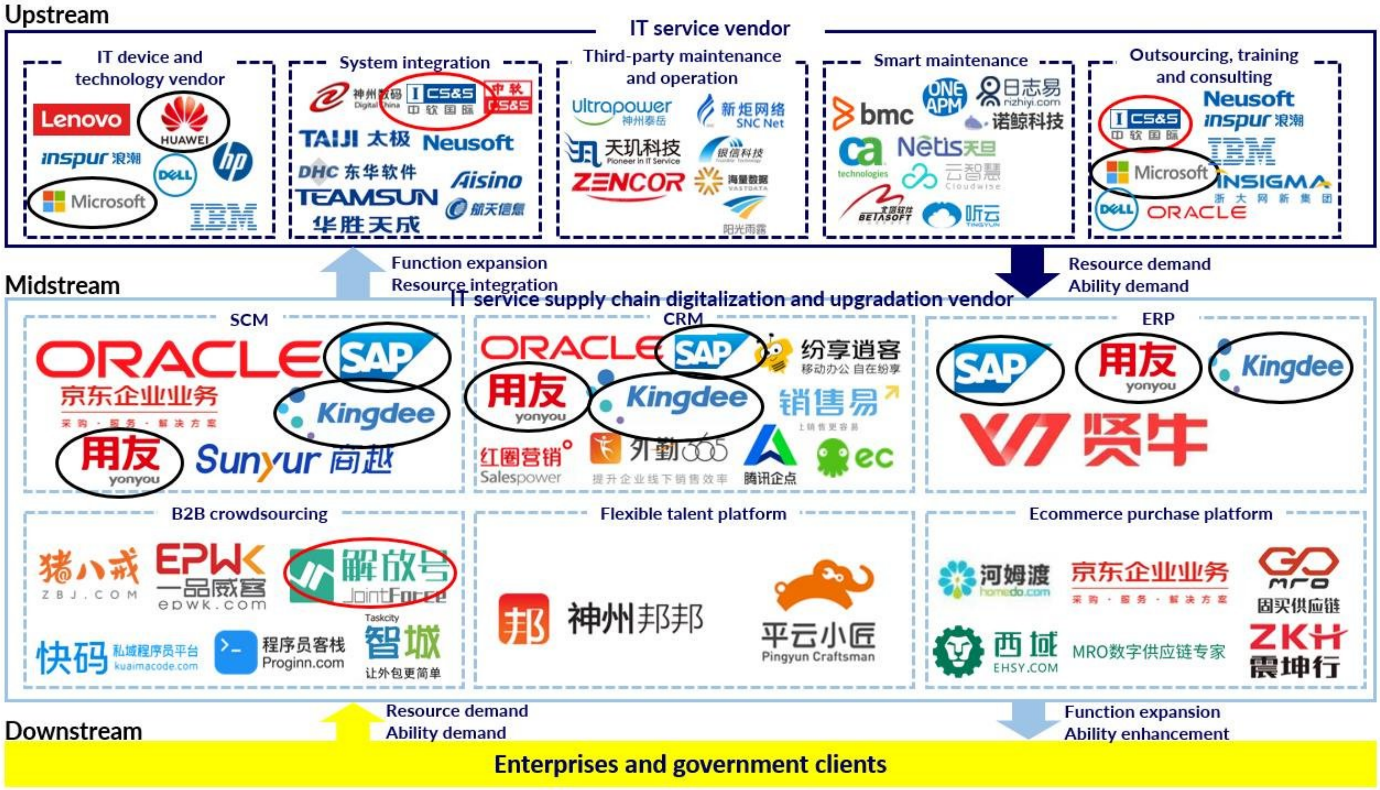
In the **midstream**, IT services mainly include services related to SCM (supply chain management), CRM (customer relationship management), ERM (enterprise resource management), B2B crowdsourcing, flexible talent platform, ecommerce purchase platform, etc, according to iResearch. We broadly see this as an application layer targeting the actual needs of downstream users. For example, SCM solves the supply chain issues for a retail company and ERP (enterprise resource planning) solves issues related to accounting and financial reporting. IT services related to these products and platforms fall under the midstream layer. As a comprehensive IT services company, Chinasoft Intl also has exposure in this layer as the company specialised in providing a full cycle of services. Jointforce under Chinasoft Intl also provides services such as crowdsourcing on projects, matching HR talent, etc.

Downstream includes the end-users of IT services

Lastly, in the **downstream**, we see that 2019-2021 was a symbolic period for the Chinese government's pursuit of information digitalisation and cloud construction. The 14th Five-year Plan shows a clear direction for government to digitalise the society and places significant focus on the development of IT-related products and services. This pushes information digitalisation in key industries such as finance, telecommunication and education. Chinasoft Intl should be a key beneficiary as more enterprises should demand digitalised business models and operations in the future. CSI could be the pioneer to lead these businesses to digital transformation.

Figure 25

Full layout of IT service industry chain



Note: Circled in red is Chinasoft Intl or the business units of Chinasoft Intl; circled in black are the key partners of Chinasoft Intl. Source: CLSA, iResearch

A layman's way to describe IT services

We can break down IT services into a service chain, as above, or we can use a layman's description of what IT services are or what Chinasoft Intl offer by broadly categorising the offerings of a typical major IT services company into 'before the launch of IT infrastructure' and 'after the launch of IT infrastructure.'

'Before the launch of IT infrastructure' vs 'after the launch of IT infrastructure'

Typical IT services 'before the launch of IT infrastructure' include project planning, IT consulting, system designation, software development, device purchase, system integration, etc., while IT services 'after the launch of IT infrastructure' secures services availability, IT security, sustainability of IT systems and application of the software, including IT solutions and asset management, etc.

Comparison with peers

CSI led in revenue against peers and had a stable NPM profile

When we compare the revenue and NPM of Chinasoft Intl's major rivals in the domestic market across the past years, we see that the company led the revenue board and presented a stable NPM profile.

iSoftStone is CIS's key rival

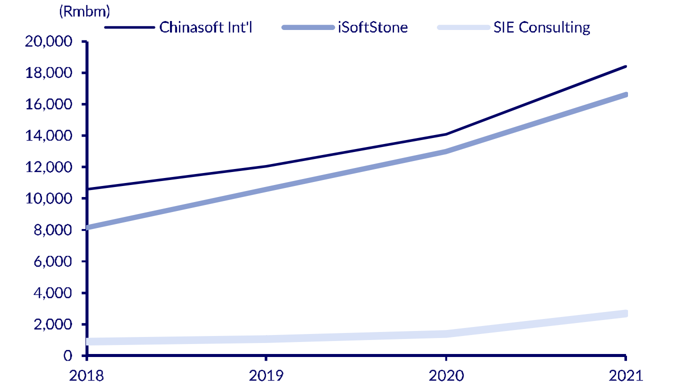
iSoftStone (301236 CH) is Chinasoft's major competitor. The two companies have similar business models (both are IT services and outsourcing companies), and revenue exposure and customer structure (~50% of revenue from Huawei) are also similar. ISoftStone was just listed on SZEX on 15 Mar 2022.

CSI takes ~60% of Huawei's IT outsourcing work while iSoftStone takes ~40%

According to CSI management, it should have a larger share of Huawei's IT outsourcing work, and CSI is Huawei's largest IT outsourcing partner. The ratio of Huawei outsourcing work should be in a ratio of 6:4, with 60% going to Chinasoft Intl and the rest going to iSoftStone.

Figure 26

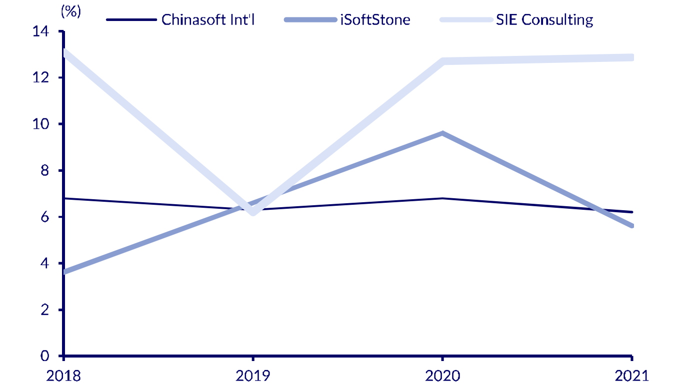
Revenue comparison with key competitors, 2018-21



Source: CLSA, Refinitiv
Note: 2021 figures for SIE consulting is based on consensus

Figure 27

NPM comparison with key competitors, 2018-21



Source: CLSA, Refinitiv
Note: 2021 figures for SIE consulting is based on consensus

Chinasoft Intl vs global IT services players

CSI's business model is similar to international leaders like IBM and Accenture

Chinasoft Intl's business model is similar in structure to global IT leaders such as IBM, Accenture, Infosys, etc. All these players provide full-stack IT services including application development, business flow outsourcing, IT consulting and infrastructure deployment. They are also actively investing in new technology fields such as cloud management, AI and big data analysis. In terms of targeted customers, financial services and TMT companies are the key client groups for both Chinasoft Intl and global IT giants.

Difference between CSI and global leaders

One key difference in terms of business models is that these global players usually us offshore IT outsourcing. They are inclined to set up service centres in lower-income regions to support the services they sell in higher-income regions – for example, a service centre in India to support IT services in Singapore. That said, they do have key service centres located in those higher-income regions, but the service centres in lower-income regions serve the non-critical functions. This approach helps the global players to tap into the regional markets while limiting costs. In contrast, the majority of Chinasoft Intl's business is still in China, focused mainly on the domestic market for the near future.

CSI shows higher revenue growth than international peers

Despite a smaller revenue scale compared with the global leaders, Chinasoft Intl posted higher revenue growth than the leading giants, thanks to the growing IT services market in China and the lower base. We see the trends of domestic substitution and more focus from the Chinese government on digitalising the society and economy as helping the company to narrow the gap in the future.

Figure 28

Comparison between Chinasoft Intl and global IT service players

	FY21 revenue (US$bn)	Market share	Top-line growth	FY21 Business structure
Chinasoft Intl	2.92	0.2%	+30.5%	**By business types:** 60% from fundamental IT service; 40% from cloud intelligence; **By regions:** 95% from greater China area; 5% from overseas;
IBM	57.35	4.8%	+3.9%	**By business types:** Software: 42.1%; consulting: 31.1%; infrastructure: 24.7%; **By regions:** Americas: 49.3%; Europe/Middle Eastern/Africa: 30.4%; Asia: 20.2%
Accenture	50.53	4.2%	+14.0%	**By client group:** Product sales: 27.6%; financial services: 19.7%; TMT: 20.4%; Healthcare and public service: 18.8%; land and resources: 13.6% **By regions:** Americas: 46.9%; Europe/Middle Eastern/Africa: 33.2%;
Infosys	13.54	1.1%	+6.1%	**By client group:** Financial services: 32.4%; retailing: 14.7%; TMT: 12.6%; manufacturing: 9.4%; high tech: 8.5%;

Source: CLSA, Wind, Gartner

Four boosters for Chinasoft Intl

Four investment theses

After working out the business overview of Chinasoft Intl and the market outlook, we see four key investment theses on the company – 1) Acceleration of China's digitalisation trend; 2) Its leading position in managed cloud services; 3) Its high-quality client base and 4) The company's key participation in HarmonyOS from Huawei.

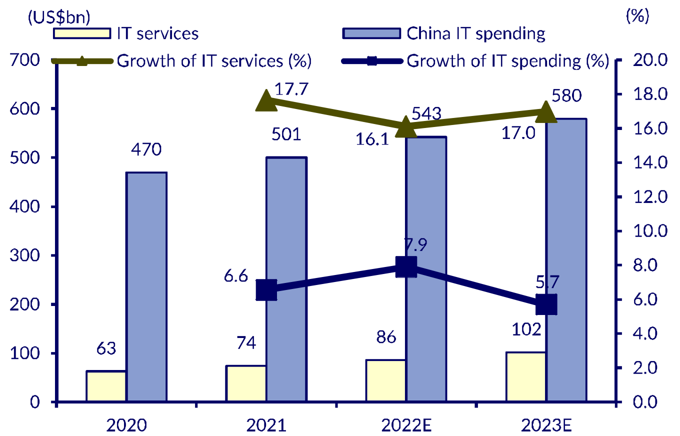
Investment thesis 1: Acceleration of digitalisation trend

Fast growth in IT services in China

According to Gartner, spending on IT services in China accounted for only 15% of total IT spending in 2021, way behind spending on data centre systems (41%) and devices (31%). Despite the relatively low contribution from IT services today, we see the spending on IT services growing at a higher rate than overall IT spending in China. Gartner forecasts that the market for IT services will increase from US$74bn in 2021 to US$102bn in 2023, with a Cagr of 17.4%, compared with a Cagr of 7.6% for overall IT spending.

Figure 29

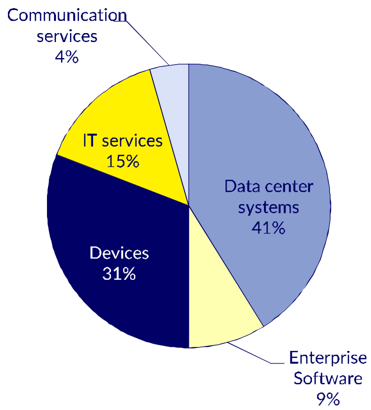
China IT service spending forecast, 2020-23E



Source: CLSA, Gartner

Figure 30

China IT spending structure, 2021



Source: CLSA, Gartner

Multiple factors are leading to the high growth of IT services

We attribute the high growth of IT services to multiple factors, including the policy tailwind for digital transformation and domestic substitution; new growth drivers from new types of IT services in fields such as AI of things (AIoT), cloud migration and big data management; and catching up to the global market.

CSI is well-positioned in the market

Chinasoft Intl, as a leading IT services company in China providing a full stack of IT capabilities, should be one of the key beneficiaries under this framework. The company's development strategy is to devote more resources to emerging markets such as managed cloud services, big data management and Huawei's IoT ecosystem, and this is in line with industry trends.

1. Policy tailwind on digitalisation transformation and domestic substitution

Policy support for digitalisation has grown through the past several years

China's government has shown support for the digitalisation of the entire society throughout the past several years, especially since 2016 with the release of the 13th Five-year Plan. The plan promoted the development of emerging industries, such as IT and digital creation, along with full utilisation of technology to improve the efficiency and competitiveness of emerging industries. Following the release of the 13th Five-year Plan in 2016, different government departments began to release more detailed implementation plans in area like enterprise cloud and big data, etc, during 2016-20.

The 14th Five-Year Plan in late 2020 reiterated Beijing's support for digitalising the economy

Further, in late 2020, the government released the 14th Five-year Plan, which reiterated and extended its support for digitalising the economy, the society and the government. There are multiple clauses in the plan that point to the digitisation at various levels, from infrastructure and architecture to software and application. Chinasoft Intl is well-positioned in the market to participate in the upgrade of the information technology sector.

'Information Innovation' is the hot topic

Indeed, ever since 2018 when US imposed sanctions on selling parts to Huawei and ZTE, and put companies like Huawei, Hikvision and iFLYTEK on the Entity List, ie, a trade restriction list published by the US Department of Commerce's Bureau of Industry and Security, the concept of "Information Innovation" ("信息技术应用创新产业" or "信创") has become a priority and development trend in China. The essence of this concept is to obtain control over information technology and ensure cybersecurity in China. The aim is to establish independent and controllable information technology architecture and standards, and to develop domestic substitution of previous imported chips, sensors, basic and application software.

"Information Innovation" is an integral part of 'new infrastructure'

The Chinese government sees "Information Innovation" as the foundation for the development of a digital economy and information security, and it is an important and integral part of the new infrastructure that will become an important driver to push the growth of the Chinese economy.

Demand for IT software and devices, along with IT services, should trend up

Against this backdrop, the demand for domestic IT software and devices should increase, and the need for IT services should go up as well correlated to the demand for domestic IT software and devices. According to an article from People.cn, the first stage to achieve the concept of Information Innovation is to invest more research and development resources on the products and infrastructure to form an ecology, and so to build the backbone for enterprises. The second stage is to apply the concept, along with the infrastructure, products, services and solutions, to key industries such as telecommunications, transportation and education, where public enterprises and government should take the lead. The final stage is to extend that ecology to the consumer markets.

Companies from key industries are taking the initiative to digitalise their operations

We believe China, after several years of development, is in the second or third stage. We believe that more companies in other key industries, such as financial, TMT and healthcare, will take the initiative to digitalise their operations. This bodes well for IT services companies like Chinasoft Intl, not least because the company has strong partnerships with leaders in these industries such as Huawei (TMT); China Mobile (TMT) and Ping An (financial).

Figure 31

Digitalisation, IT services and Information Innovation policies (partial)

Time	Name	Main content	Source
December 2016	The 13th Five-Year Plan for the Development of National Strategic Emerging Industries (十三五国家战略性新兴产业发展规划)	1) Promote the development of information technology industry and the internet economy 2) Promote the development of the digital creative industries	The State Council
January 2017	Information Industry Development Guide (信息产业发展指南)	1) To build a big data industry system and deepen the big data application services	The Ministry of Industry and Information Technology and the National Development and Reform Commission
January 2017	Software and Information Technology Service Industry Development Plan (2016-2020) (软件和信息技术服务业发展规划, 2016-2020 年)	1) Cultivate a group of leading software companies with international influence and competitiveness, 2) Strengthen the basic software service capabilities	The Ministry of Industry and Information Technology
August 2018	Guidance on promoting Enterprise Cloud Implementation (2018-2020) (推动企业上云实施指南, 2018-2020 年)	1) Promote enterprises to use cloud computing to accelerate digital and intelligent transformation, 2) Promote integration of the internet, big data, artificial intelligence and the real economy	The Ministry of Industry and Information Technology
September 2018	Guiding Opinions on Developing Digital Economy to Stabilise and Expand Employment (关于发展数字经济稳定并扩大就业的指导意见)	1) Promote the digital transformation of traditional industries and strengthen the education of digitalisation talents	The National Development and Reform Commission, the Ministry of Education, the Ministry of Science and Technology and other 16 departments
May 2019	Announcement on Enterprise Income Tax Policies for Integrated Circuit Design and Software Industry (关于集成电路设计和软件产业企业所得税政策的公告)	1) Establish preferential policies for income tax reduction and exemption for circuit design companies and software companies	The Ministry of Finance and the State Taxation Administration of PRC
December 2019	Administrative Measures for the Construction of National Government Informatisation Projects (国家政务信息化项目建设管理办法)	1) The project construction unit shall fully rely on cloud service resources to carry out intensive construction	The State Council
April 2020	Implementation Plan for Promoting the Action of Going to the Cloud and Empowering Intelligence with Data to Cultivate New Economic Development (关于推进上云用数赋智行动培育新经济发展实施方案)	1) Develop the new business model of digital economy, and promote digital transformation. 2) "Go to the Cloud" shall become the future direction	The National Development and Reform Commission, the Cyberspace Administration of China
August 2020	Notice on Several Policies for Promoting the High-Quality Development of the Integrated Circuit Industry and Software Industry in the New Era (关于新时期促进集成电路产业和软件产业高质量发展若干政策的通知)	1) Encourage and support software enterprises to strengthen the integration of resources and support research and development, import and export, preferential tax policies, etc.	The State Council
September 2020	Guiding Opinions on Expanding Investment in Strategic Emerging Industries to Cultivate and Strengthen the Growth Level of New Growth Points (关于扩大战略性新兴产业投资培育壮大新增长点增长级的指导意见)	1) Accelerate the improvement of quality and efficiency of the new generation of information technology industry	The National Development and Reform Commission
March 2021	The 14th Five-Year Plan for the National Economic and Social Development of the People's Republic of China and the Outline of the Vision for 2035 (中华人民共和国国民经济和社会发展第十四个五年规划和 2035 年远景目标纲要)	1) Accelerate the digitalisation of economy and society	The State Council
November 2021	Network Security Censorship Measures (网络安全审查办法)	1) When critical information infrastructure operators purchase network products and services, they should consider national security risks	13 departments
November 2021	14th Five-Year Plan for Software and Information Technology Service Industry Development Plan (十四五软件和信息技术服务业发展规划)	1) By 2025, to launch 100+ companies with Rmb10bn-level revenue, and 15+ companies with Rmb100bn level. 2) By 2025, the software business revenue of enterprises will exceed Rmb14 trillion, with an average annual growth rate of 12%+.	The Ministry of Industry and Information Technology
November 2021	'14th Five-Year Plan' for Big Data Industry Development (十四五大数据产业发展规划)	1) Cultivate big data market, optimise data infrastructure, and build up industrial chain.	The Ministry of Industry and Information Technology
December 2021	14th Five-Year Plan for National Information Planning (十四五国家信息规划)	1) Establish "intelligent network connection" facility construction and application promotion, information intellectual property and standardisation innovation project, manufacturing digital transformation project, etc.	The Cyberspace Administration of China
January 2022	14th Five-Year Plan for Digital Economy Development (十四五数字经济发展规划)	1) Build intelligent and comprehensive digital information infrastructure, and to promote the construction of 5G network infrastructure	The State Council

Source: CLSA, the State Council, the Ministry of Industry and Information Technology, the Cyberspace Administration of China, the National Development and Reform Commission

2. New growth driver from new types of IT services

Three generations of To-B software

According to Chinasoft Intl, the available To-B, ie, to business, software in the world is in the process of changing and evolving - from the first-generation as 'system of record,' represented by SAP and Oracle, to the second-generation as 'system of engagement,' represented by Salesforce and Workday, to the current third-generation 'Solution as a Service' (SolaaS). The current stage of software is characterised by concepts and services like multi-cloud, IoT and innovative platforms.

Higher and more complicated demand for IT services now

Chinasoft Intl sees the demand for IT services in the current stage of software development as more complicated and requiring more specialties to address. Thus this bodes well for IT services companies that help enterprises to fully realise their digital potential under the current IT landscape.

Figure 32

To-B software and IT services evolution

Era	Period	Theme of age	Features
First generation	2000-2010	Internet	OA system; web-based unintegrated departmental software;
Second generation	2010-2020	Mobile internet	CRM; Hadoop enterprise level software; digitalisation transformation
Third generation	2020-2023	Intelligence	AI + cloud; mixed cloud; one-stop service; IoT; innovative ecosystem and platform

Source: CLSA, Chinasoft Intl

A majority of enterprises put business analytics, machine learning and cloud migration as priorities

According to a survey done by Gartner in 2021 on 812 heads of IT departments from different companies, the top priority of IT departments is data and business analytics (39%), followed by cloud-based enterprise application programmes (32%), machine learning and AI (25%) and cloud migration (23%).

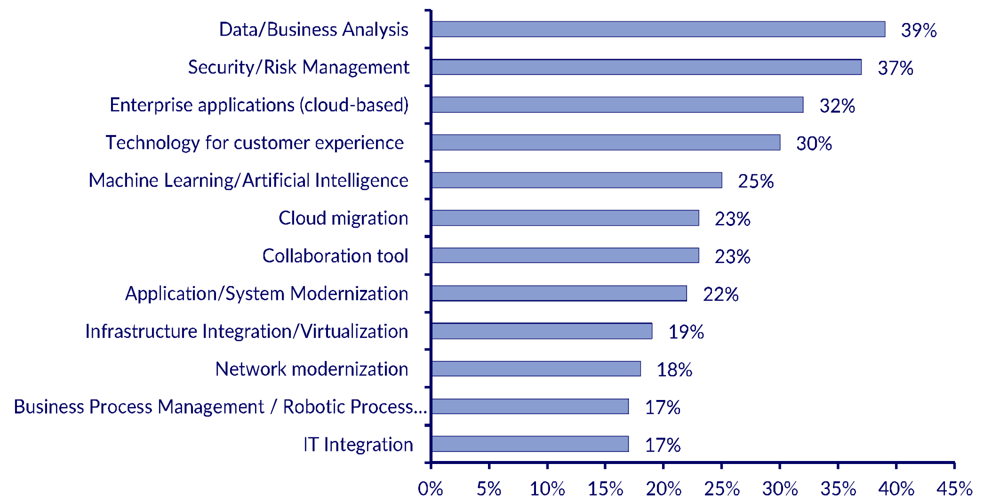
CSI's services can cater to the demand

Chinasoft Intl can offer most of those prioritised IT services to minimise the in-house IT and R&D burden, and maximise operational efficiency for different enterprises. Companies are expanding their resources spent on managed cloud services and data management, which shows that Chinasoft Intl is moving in the right direction to cater to the new or additional demand from its customers, amid the evolution of the software industry and more-complicated demand.

A survey of 812 enterprises about their IT spending preferences

Figure 33

Focus of IT spending of 812 enterprises, 2021



Based on a survey on CIOs of 812 leading companies in 2021. Source: Gartner

Still a long way for China to catch up on IT services spending

3. Catching up on IT services spending

Compared with the global market, China still lags in terms of spending on IT services. In the past, most of the Chinese companies had low investment in information systems, with tight R&D budgets and a lack of quality hardware and software. Despite being one of the largest economies in the world, China's spending on IT services was only US$74bn in 2021 compared with global IT services spending of US$1,187bn, according to Gartner. Looking at IT services spending as a percentage of total IT spending, there was a gap between China (14.7%) and the global market (28.0%) in 2021.

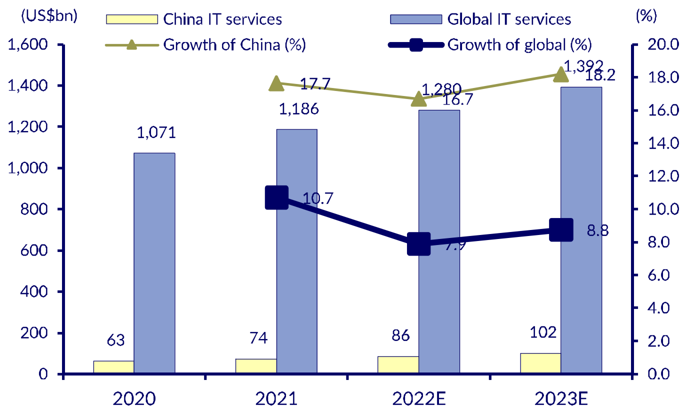
But spending on IT services in China is growing faster than in the rest of world

That said, with policy support from the Chinese government and the new growth drivers of IT services as suggested above, Chinese enterprises should begin to put more resources into software and information systems. This leads to a higher estimate for the growth rate of IT services spending in China versus the global market, as suggested by Gartner. The consulting company expects that IT services spending in China will increase from US$74bn in 2021 to US$102bn in 2023E, with a Cagr of 17.4%; while IT service spending around the globe will increase from US$1,187bn to US$1,392bn in the same period, with a Cagr of only 8.6%.

Also, the proportion of IT services spending of total IT spending is estimated to trend up to 17.5% by 2023 from 14.7% in 2021. This is a sign for China to narrow the gap with the global level and catch up on spending on IT services as seen in the rest of the world.

Figure 34

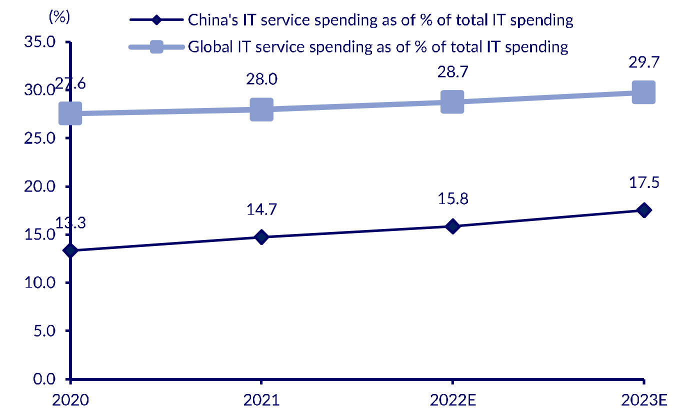
China and global IT service spending forecast, 2020-23E



Source: CLSA, Gartner

Figure 35

IT service spending as % of total IT spending, 2020-23E



Source: CLSA, Gartner

Cloud is getting more important

Investment thesis 2: Leading Position in Managed Cloud Services

In view of the support from Chinese government for cloud computing and a digital economy, and how the Covid-19 pandemic accelerated the necessity of cloud computing to ensure normal operations of business and cost savings for enterprises, we see a clearer upward trend for the China cloud market.

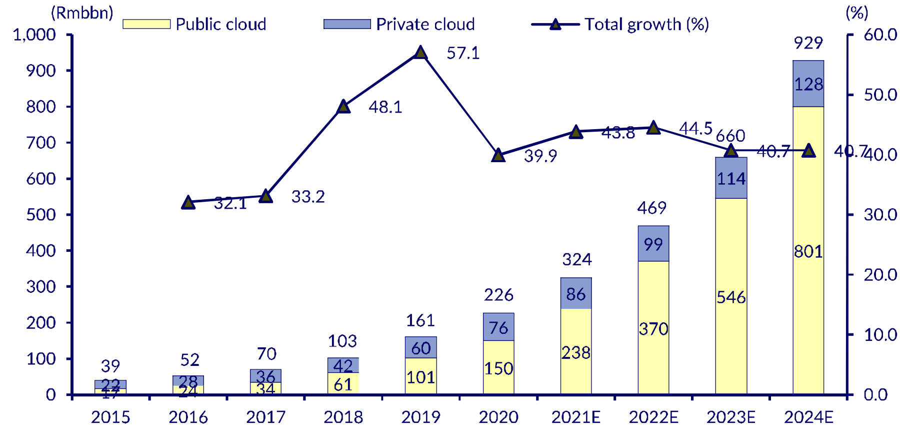
Market size of cloud is expected to grow to Rmb929bn by 2024

According to estimates by iResearch, the total market size of China's cloud market is expected to increase from Rmb324bn in 2021 to Rmb929bn in 2024, representing a Cagr of 42.0% during the period. Specifically, public cloud (including public cloud services in hybrid cloud) is estimated to grow from Rmb238bn to Rmb801bn, with a Cagr of 49.8%; while private cloud market size is expected to grow from Rmb86bn to Rmb128bn, represented a Cagr of 14.1%.

Cloud market size is estimated to grow at 42.0% Cagr 21-24E

Figure 36

China cloud service market size (public cloud + private cloud), 2015-24E



Source: CLSA, iResearch

Ali Cloud, Tencent Cloud and Huawei Cloud are the top-three cloud vendors in IaaS and PaaS layers

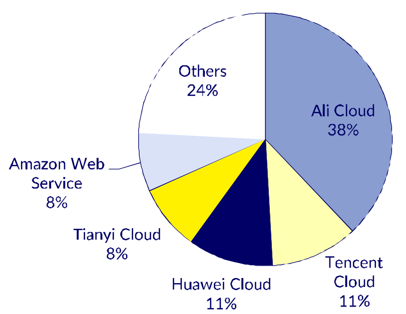
Along with the growth of the cloud market size, we see the public cloud market, only counting the IaaS and PaaS layers, is concentrated with traditional internet and technology players leading the board. According to IDC, Ali Cloud is the most popular public cloud service provider (IaaS + PaaS) with 38% market share. Tencent Cloud and Huawei Cloud have 11% market share each in 1H2021, ranking as the second and third most popular public cloud service vendors.

Huawei Cloud is growing at 34% YoY in 2021

In Huawei's 2021 annual results announcement, management of Huawei reported cloud revenue for the first time. Huawei Cloud revenue was at Rmb20.1bn in 2021, representing 34% YoY growth. As the key sales channel and key partner of Huawei Cloud, we expect Chinasoft Intl to continue collaborating with Huawei that benefit both companies.

Figure 37

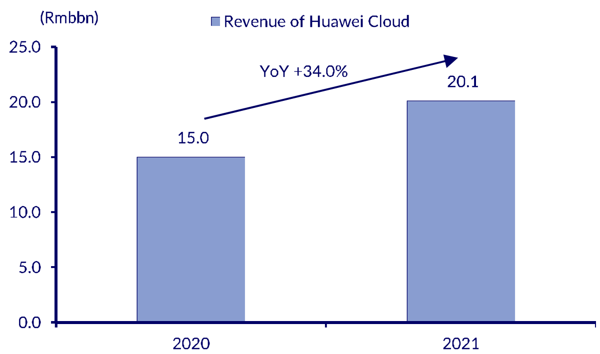
Market share of China public cloud (IaaS + PaaS), 1H2021



Source: CLSA, IDC

Figure 38

Revenue of Huawei Cloud, 2020-21



Source: CLSA, Huawei

Using multi-cloud and/or hybrid cloud is the trend

With rising demand for cloud computing amid rapid development of enterprises, especially under the consideration of data security, scalability, and performance, we see that enterprises tend to choose multi-cloud (using more than one cloud vendor) and/or hybrid-cloud (using both public and private cloud) now to save cost, avoid conflicts on ecosystem, and hedge the risk of using single cloud in case of any server issue, instead of sticking with a single cloud. According to a research paper from IDC in 2021, among existing cloud users, 95% of them used both public cloud and private cloud infrastructure, and 88% of cloud users appointed two or more cloud vendors at the same time.

There are some obvious challenges for multi-cloud and hybrid-cloud usage

How does wider cloud usage benefit Chinasoft Intl?

The rising usage of cloud in general and the popularity of multi-cloud and hybrid-cloud usage bring opportunities to managed cloud services providers, because cloud deployment, cloud migration, cloud configuration and cloud maintenance are not easy tasks for companies' IT departments. According to IDC, there are several key challenges in the multi-cloud environment, including:

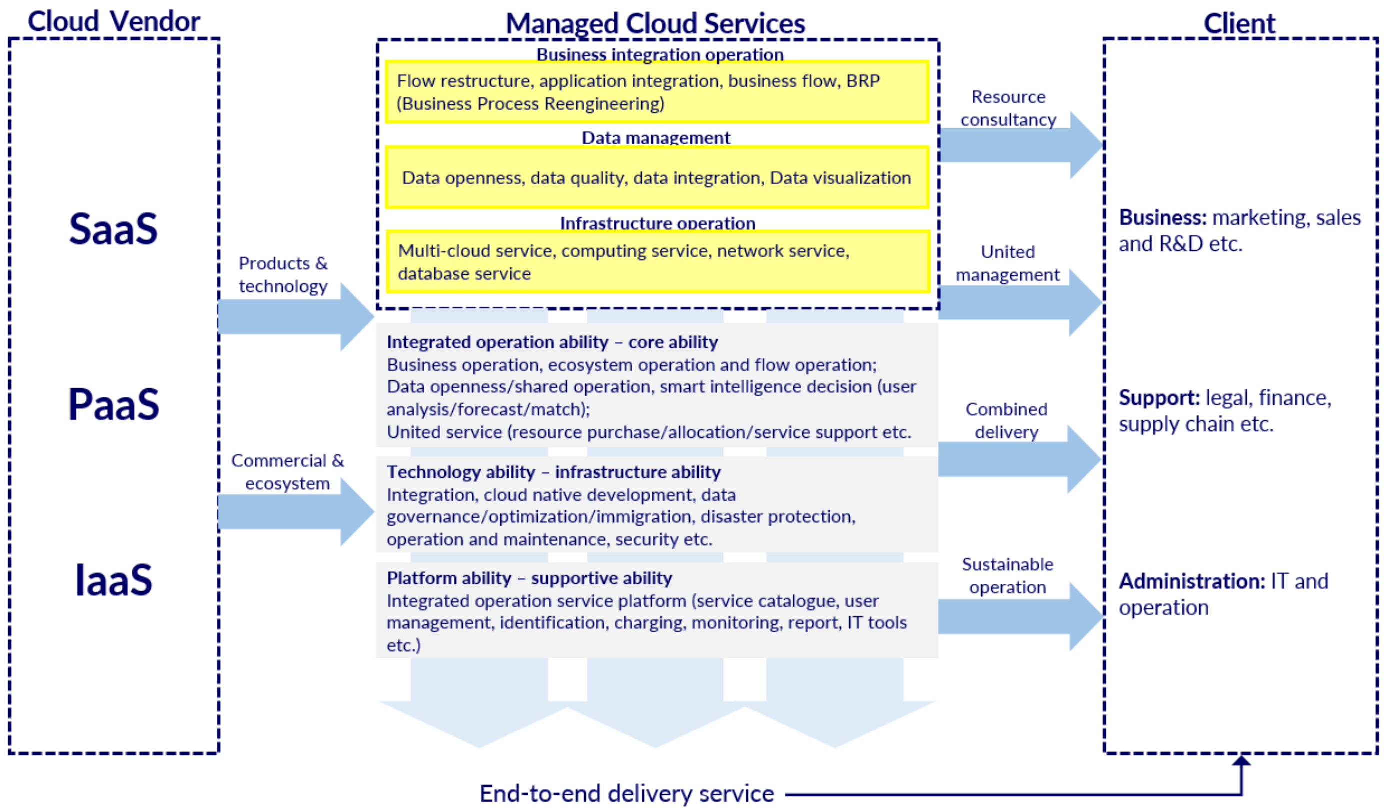
- A lack of an effective multi-cloud management platform to integrate cloud, business and network
- A lack of a digital operation platform to conduct unified operation and management of front-end applications and underlying resources
- Challenges of data asset governance
- Complex systems, data sources and types, and a large amount of heterogeneous and uniform data
- It is difficult to reach a unified standard for data usage as different departments have different positions and perspectives
- Lack of pre-sale and after-sale services

Demand for third-party managed cloud services is huge

Considering these issues, enterprises' demand for third-party managed cloud services is huge now. According to an IDC survey, over 51% of enterprises using multi-cloud or hybrid cloud require assistance from third-party cloud management providers during the transition from tradition ecosystems to a cloud environment.

Figure 39

Functions of multiple cloud operators



Source: CLSA, IDC

Market size for managed cloud services in China is growing

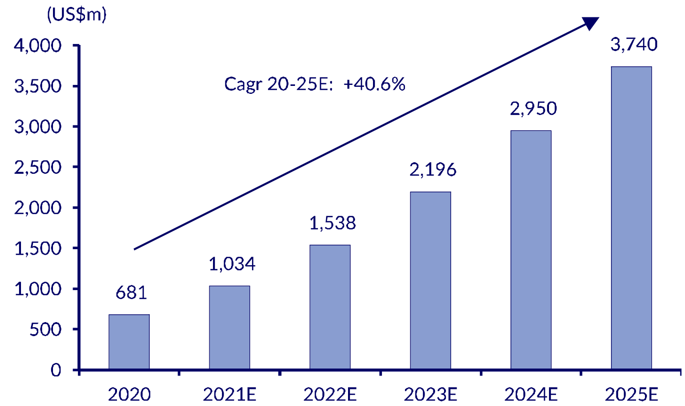
In China, the size of the managed cloud services market was recorded at around USD680m in 2020, according to IDC. The data company estimates that the total market size should grow at a Cagr of 40%+ between 2020 and 2025. We see the growth of the managed cloud services market as indeed higher than the cloud market itself, indicating the demand for these services is strong.

CSI leads in cloud deployment and cloud migration

Leveraging its expertise in managed cloud services and experience earned from working with Huawei Cloud, Chinasoft Intl is a pioneer in the trend of multi-cloud and hybrid-cloud environments and higher use of cloud management services. According to IDC, the company is the second-largest third-party cloud management provider in China, at around 6.8% market share, following Accenture; while it is one of the fastest-growing managed cloud services providers. In the sub-segment, the company is the largest cloud deployment and cloud migration player in China.

Figure 40

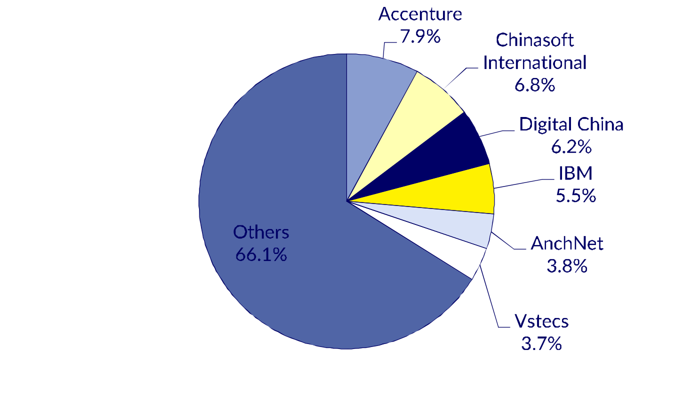
China managed cloud services market, 2020-25E



Source: CLSA, IDC

Figure 41

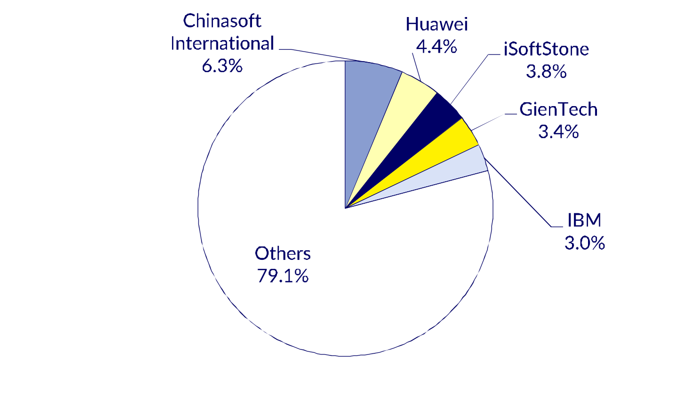
Market share in China's managed cloud services market, 2020



Source: CLSA, IDC

Figure 42

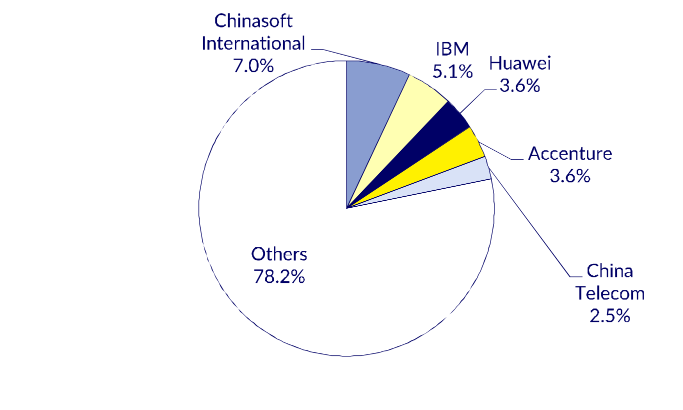
Market share in cloud deployment market, 2H2020



Source: CLSA, IDC

Figure 43

Market share in cloud migration market, 2H2020



Source: CLSA, IDC

CSI's management indicated determination to grow in managed cloud services

Chinasoft Intl's management indicated that managed cloud services will be one of the key focal points for the business in the future, as the demand for cloud services should only increase in the foreseeable future with the wave of digitalisation in China. Its partnership with Huawei, and being Huawei Cloud's highest-level cloud partner, offer a foundation of success to the company in terms of R&D capability and revenue source.

Investment thesis 3: High-quality client base; large-client-focus

'KA' strategy adopted by CSI

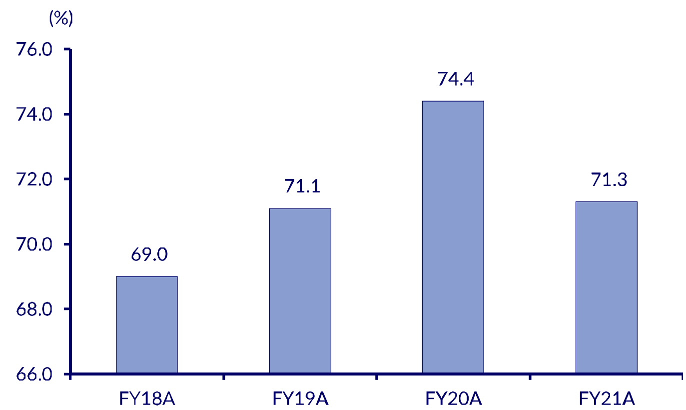
Chinasoft Intl uses a 'Key Account' ('KA') strategy to expand the business. This should create a key moat and competitive barrier for the company to create more stable revenue sources than its peers, which are not using this approach, as leading enterprises in any sector, especially the large enterprises in the financial and TMT industries, usually have a greater and more-stable IT outsourcing demand than smaller companies. The stickiness of these KAs is also higher as their switching cost is high. Chinasoft's partnerships and working relationships with the KAs benefit the majority of the company's top-line as over 78% the company's revenue came from its top-10 customers in 2021.

KA strategy should help on technological development as well

By participating in the entire range of IT services projects with mega-sized companies, Chinasoft Intl is able to accumulate better know-how and experience in dealing with more scalable and complicated IT issues. This bodes well for the company's technological development as well.

Figure 44

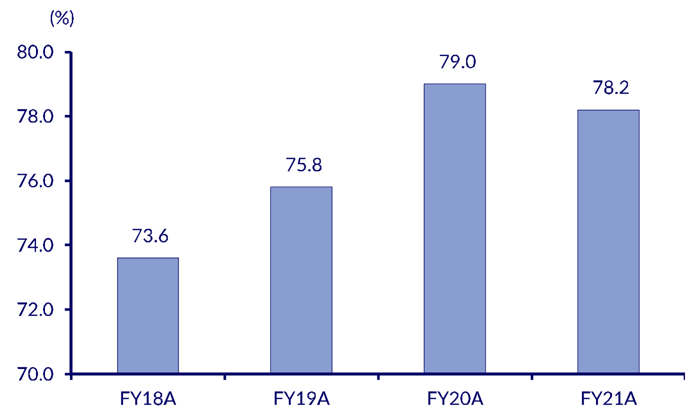
Service revenue contribution by top-5 customers, 2018-21



Source: CLSA, Chinasoft Intl

Figure 45

Service revenue contribution by top-10 customers, 2018-21



Source: CLSA, Chinasoft Intl

Huawei is CSI's major customer

Huawei is Chinasoft Intl's largest customer and partner, contributing over 53% of the company's total revenue. Thus far, we don't see the partnership slowing down or material deterioration of revenue contribution from Huawei, given Chinasoft is continuing to help Huawei build its software ecosystems including HarmonyOS and Huawei Cloud.

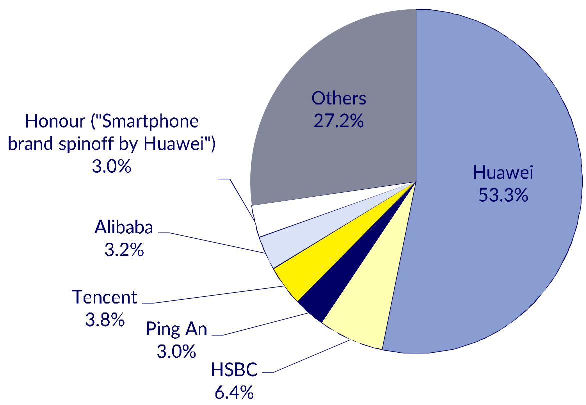
Huawei and HSBC both contribute more than US$100m revenue annually

Chinasoft Intl is also working towards having more KAs that can contribute over US$100m annually; the company has set US$100m as the threshold for its mega-clients. Only Huawei and HSBC have reached this threshold so far. Management believes that Tencent, Ping An and Alibaba could be the next to reach the US$100m benchmark in the very near term. Some other players such as China Mobile, China Telecommunications, Microsoft and ByteDance are also on the right track to reach this benchmark in the future.

Huawei is leading the board

Figure 46

Revenue contribution from major customers, 2021



Source: CLSA, Chinasoft Intl

CSI is the largest IT R&D outsourcing supplier

Part A: Win with Huawei

With over 10+ years of strategic collaboration with Huawei in IT outsourcing services and participation in Huawei's R&D, the company is now Huawei's largest IT R&D outsourcing supplier, contributing around 55-60% of Huawei's IT outsourcing work. As of Dec-21, CSI had around 20,000 IT specialists for Huawei business. The ongoing outsourcing demand and abundant project resources from Huawei, amid its business development, guarantee a stable revenue source for the company, in our view.

Figure 47

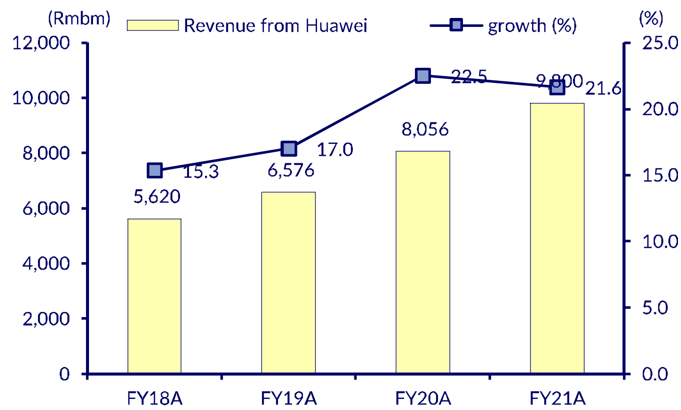
Chinasoft Intl's cooperation with Huawei

Years	Milestones
2009	- Started cooperation in telecom operator business
2010	- Top-3 market in Huawei-specific services
2011	- Ranked No. 1 overall in Huawei supplier evaluations with each product line coming out on top; successfully achieved the cooperation framework for three products and cooperated with Huawei to enter the markets in Singapore, Russia Europe and other countries
2012	- Chinasoft Intl and Huawei officially incorporated to build an associate company 'Chinasoft Intl Technology Service Limited' in high-tech park in Xi'an;
2013	- Ranked first in Huawei supplier performance evaluation - Participated in Huawei Cloud Payment
2014	- Cooperated with Huawei on multi-sector solutions, cloud computing and industrial 4.0
2015	- Signed a stock subscription and acquisition agreement with Huawei and Huawei become its strategic shareholder - Strategically cooperated with Huawei on cloud computing, cloud management, cloud middleware and big data - Became one of the core partners of Huawei financial big data business - Worked on overseas mobile payment solution with Huawei
2016	- Established the big data joint-innovation lab with Huawei - Became the first certified cloud service partner of Huawei - Jointforce cooperated with Huawei on cloud and software customisation
2017	- Signed a contract with Huawei Cloud to become the first cooperation partner in project 'Tongzhou Gongji' - Won the award of 'Huawei Cloud Best Partner' and became one of the core suppliers of Huawei - Launched 'Chinasoft Intl Huawei Cloud Joint Innovation Centre' with Huawei
2018	- Won the bid for the power marketing software system demand research item in Huawei Laos EDL project - Participated in Huawei's 'Supplier Development Plan' - Launched 'Smart Manufacturing Cloud' solution with Huawei - Launched cloud computing incubation centre with Huawei
2019	- Chinasoft Intl and Huawei jointly released financial big data intelligent application solution - Cooperated with a renowned mobile network operator and Huawei in Bhutan - Become one of the partners in Huawei Kunpeng Cloud project 'Linyun Partner' - Became tier-1 distributor of Huawei Cloud in key sales channel - Listed in core suppliers of Huawei CBG (Consumer Business Group)
2020	- Became one of Huawei's Global Partners and Huawei 2020 Excellent Global Government Partners - Performance evaluation ranked first in Huawei R&D outsource vendor list - Became the first partner to sign the Huawei HiLink ecosystem cooperation contract - Launched Jointforce Huawei Harmony Joint Innovation camp
2021	- Cooperated in Huawei HarmonyOS ecosystem - Launched Shen Kai Hong with Huawei

Source: CLSA, Chinasoft Intl

Figure 48

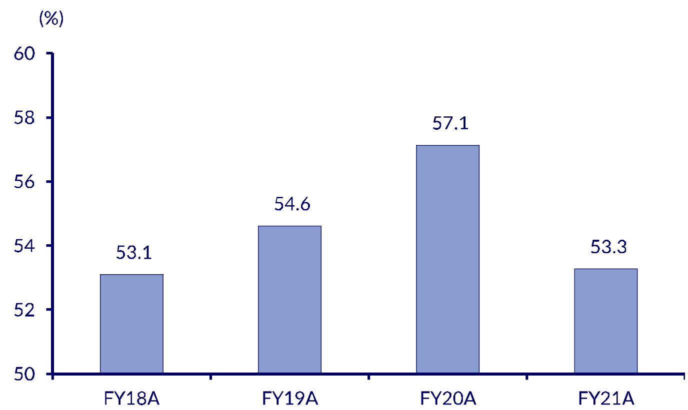
CSI's revenue from Huawei, 2018-21



Source: CLSA, Chinasoft Intl

Figure 49

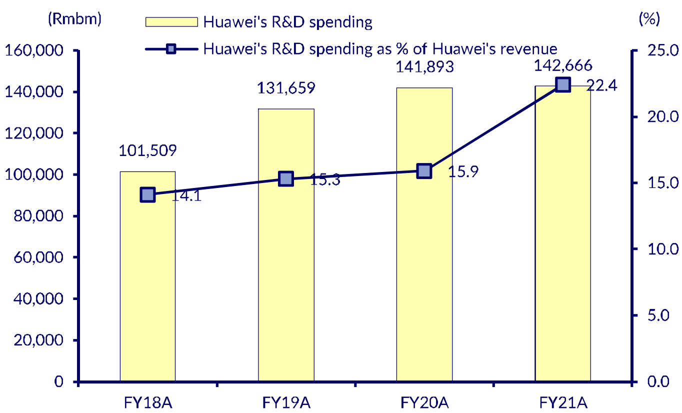
CSI's revenue from Huawei as % of total revenue, 2018-21



Source: CLSA, Chinasoft Intl

Figure 50

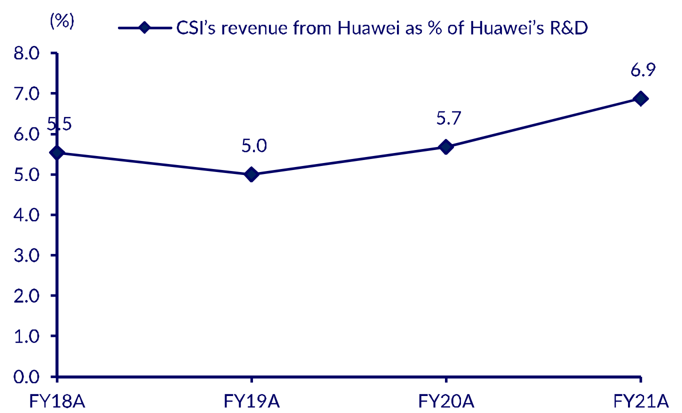
Huawei's R&D spending, 2018-21



Source: CLSA Huawei

Figure 51

CSI's revenue from Huawei as % of Huawei's R&D, 2018-21



Source: CLSA, Chinasoft Intl, Huawei

We understand Huawei also engages other IT services companies to outsource parts of its R&D projects, but we see Chinasoft Intl differentiating itself from other players in the R&D supply chain in three ways:

CSI takes 55-60% of Huawei's IT outsourcing work

- **CSI is Huawei's largest domestic IT outsourcing supplier**. The company is taking around 55%-60% of Huawei's IT outsourcing work. Chinasoft Intl also ranked first in supplier evaluation and delivery performance for Huawei in six consecutive years. CSI is also the tier-1 distributor of Huawei Cloud in key sales channels and the closest partner for Huawei HarmonyOS.

CSI is involved with Huawei's new ecosystem

- **CSI is the closest partner in Huawei's new ecosystem**. The company is the largest partner with Huawei Cloud, and also participated in the first batch of Huawei Kunpeng Partner Program and launched multiple Kunpeng joint laboratories. The company is also the first signing partner of Huawei's HiLink ecosystem.

CSI almost does all the R&D work on Huawei's key business projects

- **CSI covers almost all the R&D work on Huawei's key business projects**. According to management, Chinasoft Intl does different parts of IT services on various business projects from Huawei, including smartphone devices, cloud, network, OS, etc., covering almost all the key business lines.

CSI is improving services quality with Huawei's partnership

We see the company continuing to grow along with Huawei and replicating a win-win business model in different business lines. Through becoming a 'strategic supplier' for Huawei and joining its 'supplier development plan,' the company to is able to up-skill and improved service and project management quality, which empowers Chinasoft Intl to work better with other large customers.

CSI is also expanding to other key accounts

Part B. Expanding to other key accounts

Revenue from Huawei was hit by multiple factors, including sanctions and macro uncertainty, in 2021, thus the high reliance on Huawei could pose a risk to Chinasoft Intl's revenue. In view of this, Chinasoft Intl is also working to accelerate its strategy to reach out to other enterprises, amid strong demand for IT services in China, to improve the top line from other key accounts. As mentioned, companies in key industries such as TMT and financials should contribute the most to the company's KAs. Chinasoft Intl is also working to expand its To-G (to government) services and services to automobile companies.

CSI is BAT's leading outsourcing partner

- **Internet sector:** Tencent, Alibaba and Baidu (BAT) were among Chinasoft Intl's top-3 customers from the internet sector in 2021. The company was ranked as a Grade-A supplier for Tencent and Baidu, and also the top outsourcing partner for Alibaba and Baidu. On top of BAT, Chinasoft Intl also has a long-term relationship with Microsoft and tapped into its game business in 2020. In past years, CSI also expanded its cooperation with ByteDance, Meituan and NetEase.

CSI has a strong relationship with leading telecommunications companies

- **Telecommunications operator sector:** Benefiting from the development of 5G-related services, the operator sector boomed in the past few years. Chinasoft Intl seized the opportunity to offer the leading operators, including China Mobile and China Telecommunications, wireless, network, data communication, enterprise equipment, business technical and managed cloud services to help them build core technical capabilities in delivering their services.

Long customer relationship with multinational financial institutions

- **Financial sector:** Financial institutions also have a strong demand for services for cost-saving and digitalisation needs. Chinasoft Intl has long been working with leading banks and insurance companies like HSBC, AIA and Ping An. According to management, CSI is already one of the leading IT outsourcing companies in the world.

Figure 52

Chinasoft Intl's major services, by category

Services category	Sector	Offerings
Industry solutions	Government	Audit management; social insurance and benefits; state-owned asset mgmt.; food and medicine management; administrative management; policy planning system; online audit application; public portal; cloud migration & integration
	Manufacturing/ logistics	ERP; MES; LES; safety production management; WMS; EAI; product code tracking
	Finance	Payment system; receivables system; credit system; bank card system; credit card system; risk management system; digital marketing; supply chain leverage; supply chain leverage; digital insurance system; insurance dev. support; reimbursement system
	Public services	One card access; AFC; ACC; smart transportation; airport operating system
	Telecom	Mobile payment; mobile instant communication; mobile community; corporate blog; mobile application store; one-click dial; embedded browser; mobile advertisement platform;
	High-tech internet	Product development; software & hardware testing; embedded software development; consulting & solution implementation; e-commerce solutions; offshore delivery centre; mobile terminal development; UI design; web development solution;
General solutions	CRM; OA; BI; portal group; RFID; GIS; electronic ticketing system;	

Source: CLSA, Chinasoft Intl

Investment thesis 4: Soaring with Huawei's HarmonyOS

Huawei is shifting more focus from consumer hardware business to create a software ecosystem

We understand that Huawei is working under a series of sanctions from the US. Various macro headwinds are also impacting significantly on the overall business, especially the consumer hardware business. However, Huawei is o shifting more R&D resources to build its own software ecosystem, including HarmonyOS for IoT products and Huawei Cloud, to sustain its business development and expand its technology footprint. HarmonyOS for the IoT ecosystem is one of Huawei's biggest ambitions, as an operating system is almost a necessity for any devices in an IoT ecosystem and in a digitalised society.

HarmonyOS is Huawei's key driver to create an IoT ecosystem

Currently, Huawei is a very key player in the domestic IoT industry. After launching multiple smart devices, along with its 5G and cloud exposure, the tech giant introduced HarmonyOS (鸿蒙) in 2019, a core operating system for Huaweis to step forward to create a complete IoT ecosystem. The HarmonyOS blueprint includes the strategy of '1+8+N' (based on 1 smartphone + 8 devices from Huawei such as tablets, smart watches and smart screens, etc., to provide N scenarios for smart solutions and ecosystems) has high flexibility to allow more manufacturers and developers to join the ecosystem.

As of 2021, HarmonyOS has been deployed on more than 220m+ Huawei devices. More than 4,500 products from more than 1,900 ecosystem partners have joined HarmonyOS Connect. Over 115m+ new HarmonyOS Connect devices were launched.

Huawei's major deployments to create an IoT ecosystem

Figure 53

Huawei's main deployments for IoT

Projects	Introduction
HarmonyOS	An open-source operating system for all scenarios and terminals
HiLink	Huawei's open interconnection platform for smart home appliances, which aims to solve the problem of interconnection and interaction between various smart terminals. The platform functions mainly include intelligent connection and intelligent linkage.
HarmonyOS Connect	The two brands of 'Works with HUAWEI Hilink (HiLink)' and 'Powered by HarmonyOS (HarmonyOS)' were upgraded to 'HarmonyOS Connect,' which is a new brand of Huawei's consumer business for ecological intelligent hardware
HiCar	The human-vehicle-home full-scenario smart interconnection solution, which extends apps into the car, realising the full-scene experience with the mobile phone as the core, and creating a smart travel experience for consumers.
Devices, cloud, telecommunication network, etc., as the foundation for HarmonyOS ecosystem	

Source: CLSA, Huawei

Huawei donated the source code of HarmonyOS to enlarge the audience base

To grow the IoT ecosystem, Huawei donated the core source code of HarmonyOS to 'Open Atom Open Source Foundation' ("开放原子开源基金会"), a foundation led by the Ministry of Industry and Information Technology (MIIT) and jointly initiated by Alibaba, Baidu, Huawei, Inspur and Tencent in Sep-20 to build a framework and platform for enterprises to equip with better connectivity. In simple terms, enterprises can get the source code from the foundation.

Other enterprises can use the source code to create their own operating system

This is then branded as the 'OpenHarmony' project, and this indeed echoes with Huawei's ambition to build a complete IoT ecosystem. By donating part of the source code of HarmonyOS, enterprises or manufacturers can build their own operating system based on the source code from Huawei. In such a case, Huawei can collaborate with other manufacturers in the future on operating systems and jointly develop an ecosystem that can connect seamlessly across different terminals.

CSI is the key member to assist Huawei on HarmonyOS

How does CSI benefit and evolve from Huawei's HarmonyOS?

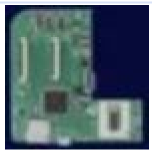
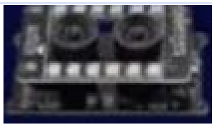
Leveraging the long-term partnership with Huawei, Chinasoft Intl is one of the core members in assisting Huawei to develop its HarmonyOS ecosystem and expand the IoT blueprint. Chinasoft Intl's key involvement in HarmonyOS includes R&D outsourcing, middleware development and modules development. The company mentioned that CSI took around 60%+ share of Huawei's budget on HarmonyOS R&D outsourcing and middleware development. Chinasoft Intl further disclosed that R&D outsourcing related to HarmonyOS accounted for around 10% of total revenue in 2021, with GPM in the low-20s.

At least 10% of revenue from Huawei will be spent on R&D

As mentioned, building a complete IoT ecosystem is one of Huawei's ambitions. During its recent FY21 earnings presentation, Huawei's management reiterated its stance towards R&D and the importance of HarmonyOS, amid pressure on its top line. Not less-than 10% of revenue will continue to be spent on R&D in the near future. Huawei's guidance offers Chinasoft Intl a solid foundation of revenue, given the company is Huawei's core partner in developing HarmonyOS.

Figure 54

Key involvement of Chinasoft Intl in HarmonyOS

Types	Business model & offerings	Normalised GPM estimates	Sample products (partial)	
HarmonyOS R&D outsourcing	Modification of the core code of operating system from Android to HarmonyOS	20%-30%		
Middleware development	CSI takes a high proportion in third-party technical cooperation development of some core components	30%-35%		
Modules development	Similar to the smart access module business line of Tuya. Now the module has entered the stage of mass production, and the sales volume is tens of millions of sets. Main offerings: ➢ Bluetooth module ➢ Double mode access ➢ WIFI module ➢ IoT development board set	40%	Wi-Fi MESH splicing combination + dimming **Applicable:** consumer electronics, lighting **Advantages:** easy to embed and integrate, low power consumption, easy to use and maintain, integrates HarmonyOS Connect SDK	
			HarmonyOS Connect SDK WIFI + BLE Smart Cat Eye **Applicable:** smart door lock **Advantages:** easy to embed and integrate, low power consumption and high performance, integrates HarmonyOS Connect SDK	
			Wi-Fi + BLE + Camera Device Connection Module **Applicable:** doorbell, security inspection **Advantages:** stable connection, small delay, industrial-grade application integration, integrates HarmonyOS Connect SDK	
			Smart IoT development board	

Source: CLSA, Chinasoft Intl

CSI set up a new business group – ABG - to facilitate business related to HarmonyOS and OpenHarmony

To better allocate resources on HarmonyOS, the company established a new business group, ABG (AIoT Business Group), in Sep-21 to facilitate and support the development of HarmonyOS and the OpenHarmony project. CSI's management believes that the OpenHarmony project can increase demand for IT outsourcing and IT services for the company, because more manufacturers and enterprises will need of IT services and expertise to set up their own operating system via this project.

Shen Kai Hong is designed to partner with Huawei on Information Innovation

The company also set a subsidiary called Shen Kai Hong almost at the same time as ABG, primarily to partner with Huawei to participate in the concept of Information Innovation ("信创") as part of the OpenHarmony project, primarily to help the government and enterprises in key industries to digitalise and achieve domestic substitution through designing chips for the operating system.

CSI's ownership of Shen Kai Hong was down to 19.5% in Dec-21

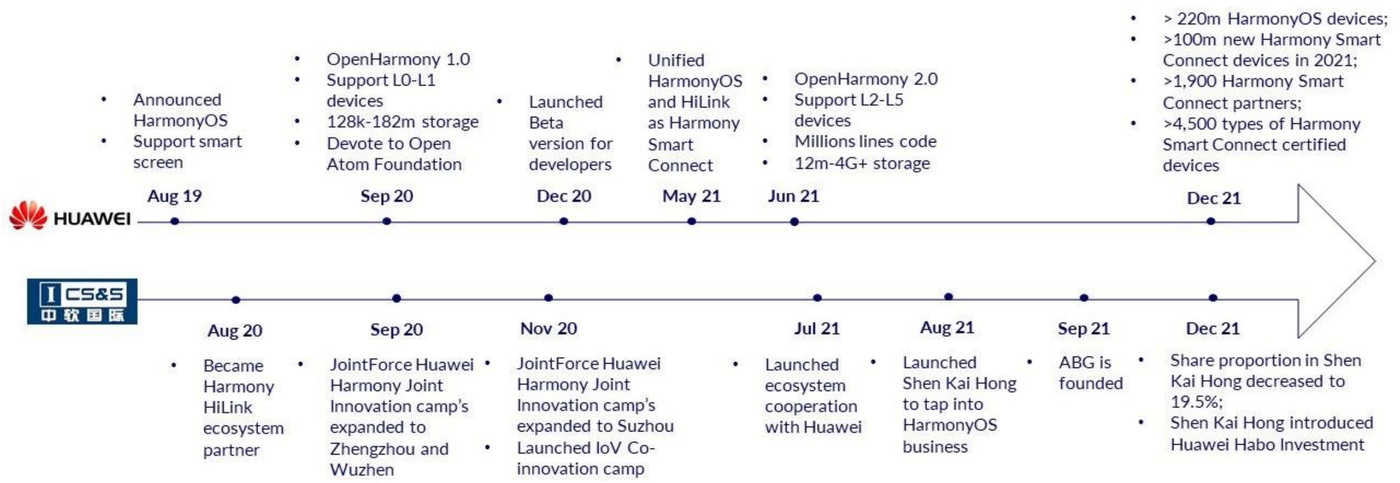
It is worthwhile to note that CSI's shareholding of Shen Kai Hong was down from 50.83% to around 19.5% by Dec-21. According to management, this is based on considerations from 'Administrative Measures for the Qualification of Confidential Information System Integration,' whereby any company participating in the Information Innovation project cannot have more than 20% foreign ownership. In the future, Shen Kai Hong will still mainly be managed by Chinasoft Intl while Huawei will provide technical support.

CSI also partnered with Huawei to establish Huawei Harmony Joint Innovation camp

Chinasoft Intl also established the Huawei Harmony Joint Innovation Camp with Huawei in the past few years under the Jointforce platform to penetrate IoT manufacturers with its expertise. The purpose of the camp is to integrate enterprises into the HarmonyOS ecosystem, mainly in IoT or IoV (internet of vehicles). Chinasoft Intl intends to help different enterprises to access HarmonyOS by offering IT services such as training, development and launching.

Figure 55

Development path of HarmonyOS and cooperation of CSI



Source: CLSA, Chinasoft Intl, Huawei

Solid business outlook

CSI is the key beneficiary under the "digitalisation era"

Because Chinasoft Intl benefits from the trend towards digitalisation, 20+ years of know-how in IT services and its long-term partnership with Huawei and other multi-national corporates, we believe that it should be a key long-term beneficiary in the 'digitalisation era' as advocated by the Chinese government.

Revenue and NP Cagr 2023-26CL: +17%/+25%

We expect Chinasoft Intl to grow revenue by 23%/23%/20% in 2022-24. Growth momentum should continue in the medium term, translating into a top-line Cagr of 17% over 2023-26CL; We estimate the firm's bottom line to grow by 15%/30%/28% in 2022-24, and project a medium-term Cagr of 25% over 2023-26CL.

A structural revenue growth story

Medium-to-long term top-line growth supported by the partnership with Huawei

Chinasoft Intl's medium- to long-term top-line growth should be supported by Huawei's ambition to building a software ecosystem, meaning continued R&D spending on Huawei's cloud business, HarmonyOS and other technology advancements that bode well for Chinasoft Intl as Huawei's key IT outsourcing partner. We expect Huawei's revenue growth should remain at 15%+ every year in the medium-term, despite some near-term pressure on its consumer business and macro overhang on the brand. We expect Huawei's contribution of revenue to Chinasoft Intl to be down from 53% in 2021 to 50% in 2022.

CSI is also working to improve revenue contribution from other key accounts

That said, the company is also working to improve the revenue contribution from key accounts outside Huawei in the near-term to sustain healthy top-line growth. Currently, three customers – Huawei, HSBC and Tencent - topped the US$100m revenue threshold. Management expects customers like Alibaba, Honour (the smartphone brand spin-off by Huawei) and Ping An can achieve the US$100m threshold in 2022, and other customers like China Mobile and China Telecommunications are also on the right track to get there. Demand for IT services as a result of acceleration of digitalisation is the booster to the medium-term top-line growth for these key accounts. We expect non-Huawei revenue to grow at a Cagr of 27% in 2022-24CL.

CSI is a winner from rising cloud usage

In view of the support from the Chinese government for cloud computing and a digital economy, and how the Covid-19 pandemic accelerated the necessity of cloud computing to ensure normal operations for business and cost savings for enterprises, the China cloud market is on a clear upward trend; it should have a Cagr of 42% during 2021-23CL. Chinasoft Intl, by leveraging its expertise in managed cloud services and experience earned from working with Huawei Cloud, should be a winner from the trend towards higher usage of cloud management services. The company acknowledges its advantage in cloud management services and other new emerging businesses such as big data management, and thus is spending more resources to expand these business lines as the driver for revenue growth.

Fundamental IT services should grow at 14-15% in 2022-24CL; Cloud intelligent services should grow at 30-42% in the same period

After considering the near-term pressure from the Covid-19 pandemic, its effects the services delivery schedule, uncertainty about the macro-economy and tension between the US and China on Huawei, we expect CSI's fundamental IT services to grow at 14-15% per year over the next three years, while cloud intelligent services should maintain strong growth momentum at revenue growth of 30-42% in 2022-24, thanks to the lower base and demand for cloud management services from rising cloud usage.

Figure 56

Revenue forecast by business group, 2018-24CL

	FY18A	FY19A	FY20A	FY21A	FY22CL	FY23CL	FY24CL
Cloud Intelligence Group - CIG (Emerging cloud business)	1,598	2,047	3,243	5,299	7,524	10,383	13,498
Growth (%)	60.1	28.1	58.4	63.4	42.0	38.0	30.0
Proportion (%)	15.1	17.0	23.0	28.8	33.3	37.5	40.6
Traditional business (IT outsourcing)	8,987	9,995	10,858	13,099	15,064	17,324	19,749
Growth (%)	9.0	11.2	8.6	20.6	15.0	15.0	14.0
Proportion (%)	84.9	83.0	77.0	71.2	66.7	62.5	59.4
Total revenue	10,585	12,042	14,101	18,398	22,588	27,707	33,248
Growth (%)	14.5	13.8	17.1	30.5	22.8	22.7	20.0

Source: CLSA, Chinasoft Intl

Figure 57

Revenue forecast by customer, 2018-24CL

	FY20A	FY21A	FY22CL	FY23CL	FY24CL
Huawei	8,030	9,800	11,270	12,961	14,905
Growth (%)		22.0	15.0	15.0	15.0
Contribution (%)	56.9	53.3	49.9	46.8	44.8
HSBC	830	1,180	1,416	1,628	1,840
Growth (%)		42.2	20.0	15.0	13.0
Contribution (%)	5.9	6.4	6.3	5.9	5.5
Tencent	500	706	974	1,315	1,710
Growth (%)		41.2	38.0	35.0	30.0
Contribution (%)	3.5	3.8	4.3	4.7	5.1
Alibaba	400	590	814	1,099	1,429
Growth (%)		47.5	38.0	35.0	30.0
Contribution (%)	2.8	3.2	3.6	4.0	4.3
Ping An	450	550	660	779	903
Growth (%)		22.2	20.0	18.0	16.0
Contribution (%)	3.2	3.0	2.9	2.8	2.7
Others	3,891	5,572	7,454	9,925	12,461
Growth (%)		43.2	33.8	33.2	25.5
Contribution (%)	27.6	30.3	33.0	35.8	37.5
Total revenue	14,101	18,398	22,588	27,707	33,248
Growth (%)	17.1	30.5	22.8	22.7	20.0

Source: CLSA, Chinasoft Intl

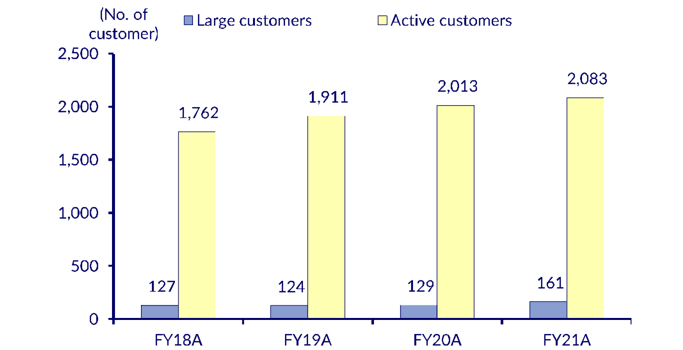
Stickiness of KAs is usually high

Revenue quality analysis

CSI's revenue growth relies heavily on its key account strategy; 71.3% and 78.2% of services revenue was from the top-5 and top-10 customers in 2021. The stickiness of KAs is usually higher as their switching costs are high and they usually have more-stable demand for IT outsourcing services. From CSI's perspective, partnering with large customers can allow it to gain better know-how about IT services and project management and face less uncertainty on revenue, especially during economic downturns. We believe the company will continue its key account strategy in the future.

Figure 58

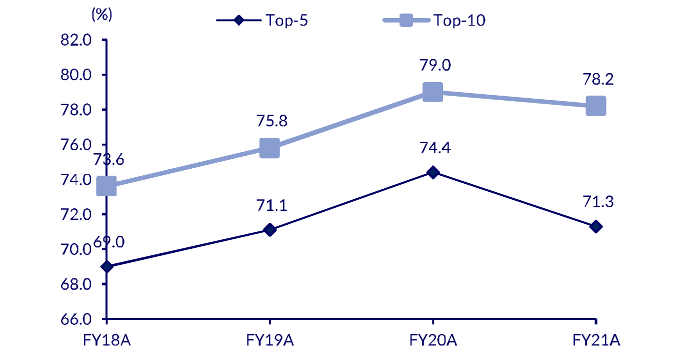
Numbers of customers, 2018-21



Large customers: customers who contributed more than Rmb6m of service revenue within the past 12 months. Source: CLSA, Chinasoft Intl

Figure 59

Contribution of revenue from top-5/top-10 customers, 2018-21



Source: CLSA, Chinasoft Intl

Demand for services can be reflected in employee numbers

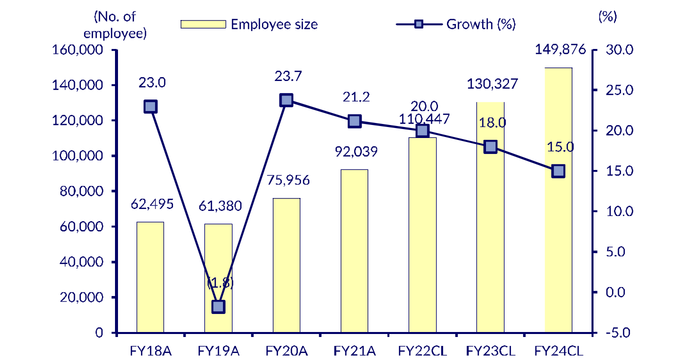
Another angle from which to look at revenue is the number of employees. The core rationale of Chinasoft Intl's business is to scientifically allocate the appropriate IT professionals and experts to different IT projects from customers, with a primary aim to maximise the value per IT talent. We see that the demand for IT services can also be reflected by employee numbers.

Revenue per employee is trending up, implying improvement of working efficiency

During FY18-21, Chinasoft Intl's employment increased by 62,495 to 92,039, representing a Cagr of 13.8% during the period. This is tad lower than the revenue Cagr of the same period at 20.2%. Revenue contribution by employee was up from Rmb169,374 in 2018 to Rmb199,894 in 2021, implying improvement of working efficiency. Looking forward, we expect the employee number will continue to grow along with revenue, maintaining a strong correlation, yet revenue growth should outweigh the growth of employees, implying improving working efficiency.

Figure 60

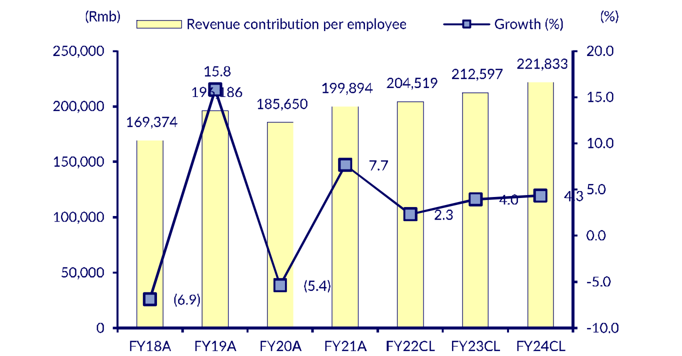
Employee number, 2018-24CL



Source: CLSA, Chinasoft Intl

Figure 61

Revenue contribution per employee, 2018-24CL



Source: CLSA, Chinasoft Intl

Decent profitability outlook despite near-term margin pressure

We forecast near-term GPM pressure due to resources used for Huawei's new initiatives

We expect near-term GPM pressure for the company, primarily due to rising employee costs due to expanding its technology scope, especially on cloud management services and big data management. Pinpointing Huawei, we expect the company to spend more resources to help Huawei expand the cloud business, HarmonyOS, and smart vehicles by creating a thorough software ecosystem that should affect the near-term margin. Currently, GPM for Huawei work is around low to mid-20s.

GPM pressure should be largely offset by Software Factory and managed cloud services

That said, near-term GPM pressure should be partially offset by 1) the company's Software Factory initiative that standardises the business flow and know-how experience, and 2) increasing revenue share on managed cloud services that have higher normalised GPM (~35%+).

We expect GPM to stick at 26-28% in 2022-24CL

We forecast a tad of GPM contraction of -50bps in 2022 to 26.2% and then gradual improvement to around 27.5% in 2024. Positive surprise on GPM could come from business recovery for Huawei that loosens its R&D budget and a faster-than-expected ramp-up of Software Factory to standardise the project experience.

Opex should be relatively stable as a percentage of revenue

On the operating expenses side, we expect Chinasoft Intl to maintain present operating expenses as percentage of revenue in 2022-24, with a tad of operating leverage on administrative expenses and sales and marketing expenses. R&D expenses should remain largely stable in the forecast years to sustain the development of new technologies and support Huawei on its initiatives on software.

We forecast core OPM to expand moderately from 5.2% to 6.9% in 2022-24

Overall, we expect sales and marketing expenses to be at around 5% of revenue, G&A expenses to be at around 9% of revenue and R&D expenses to be at around 7% of revenue in 2022-24. Thus, we forecast core operating profit margin (core operating expenses include sales & marketing expenses, G&A expenses and R&D expenses) to grow moderately from 5.2% to 6.9% in 2022-24, following top-line growth and some operating leverage from operating expenses, yet offset by near-term margin pressure on the GPM line.

We expect PBT to grow from Rmb1,419m in 2022 to Rmb2,381m by 2024

Non-operating lines mainly are other income, other gain and finance costs. We don't see material changes on these items in the forecast years. Including other items such as other revenue and impairment loss on investment, we expect profits before tax to grow from Rmb1,419m in 2022 to Rmb2,381m by 2024.

We expect effective tax rate to stay at around 8%

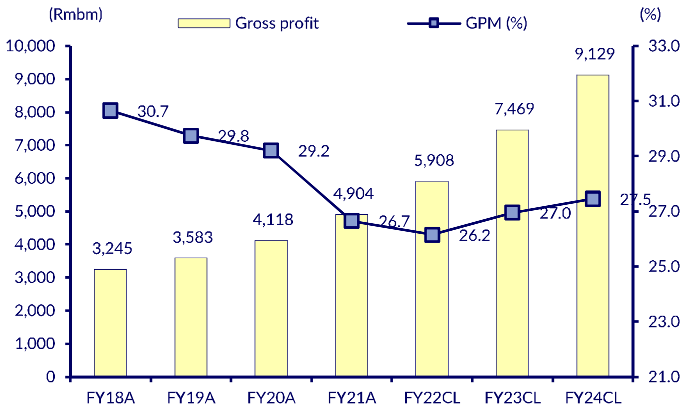
Lastly, Chinasoft Intl's effective tax rate has remained in the range of 5-9% the past three years from 2019 to 2021, benefiting from the high technology and new technology enterprises preferential tax rate of 15%, and different tax benefits from the government. We expect effective tax rate to remain at around 8% each year.

NP attributable to equity shareholders margin should improve from 5.8% to 6.6% during 2022-24

Thus, we forecast net profit to grow from Rmb1,311m in 2022 to Rmb2,190m in 2024. Deducting the non-controlling interests, we expect net profit attributable to equity shareholders to record at Rmb1,309m in 2022 and further increase to Rmb2,185m in 2024, implying margin growing from 5.8% to 6.6%.

Figure 62

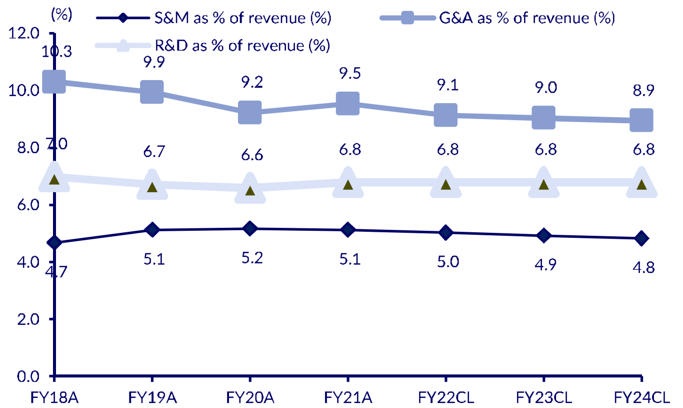
Gross profit and GPM, 2018-24CL



Source: CLSA, Chinasoft Intl

Figure 63

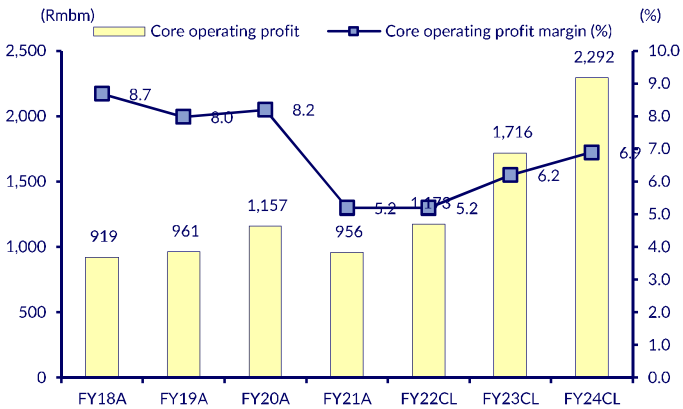
Core operating expenses as percentage of revenue, 2018-24CL



Source: CLSA, Chinasoft Intl

Figure 64

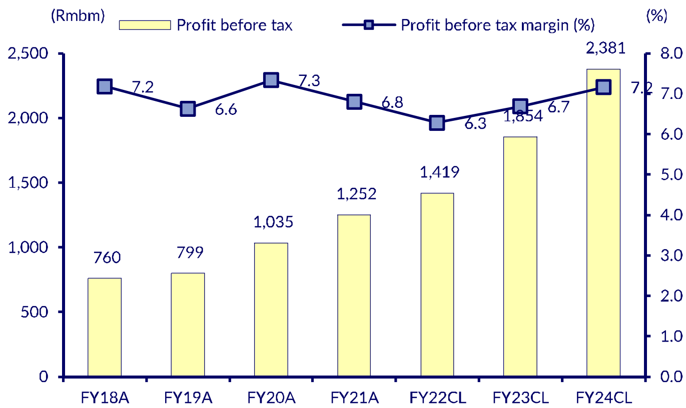
Core operating profit and Core OPM, 2018-24CL



Source: CLSA, Chinasoft Intl

Figure 65

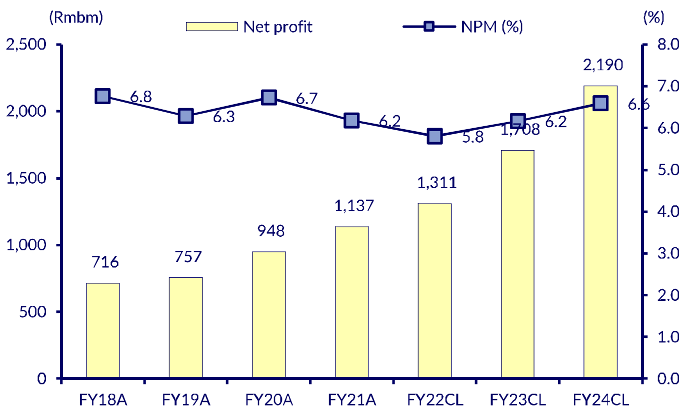
Profits before tax and PBT margin, 2018-24CL



Source: CLSA, Chinasoft Intl

Figure 66

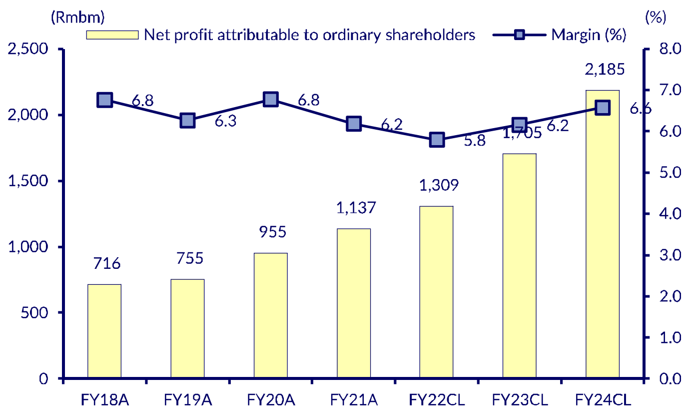
Net profit and NPM, 2018-24CL



Source: CLSA, Chinasoft Intl

Figure 67

Net profits attributable to shareholders and margin, 2018-24CL



Source: CLSA, Chinasoft Int'

Figure 68

Profit and loss, 2018-24CL

Rmbm	FY18A	FY19A	FY20A	FY21A	FY22CL	FY23CL	FY24CL
Revenue	**10,585**	**12,042**	**14,101**	**18,398**	**22,588**	**27,707**	**33,248**
Growth (%)	14.5	13.8	17.1	30.5	22.8	22.7	20.0
Cost of sales and services	(7,340)	(8,459)	(9,983)	(13,494)	(16,680)	(20,238)	(24,119)
Gross profit	**3,245**	**3,583**	**4,118**	**4,904**	**5,908**	**7,469**	**9,129**
Growth (%)	18.0	10.4	14.9	19.1	20.5	26.4	22.2
Margin (%)	30.7	29.8	29.2	26.7	26.2	27.0	27.5
Selling and distribution costs	(496)	(618)	(729)	(943)	(1,136)	(1,365)	(1,605)
Selling and distribution as % of revenue (%)	4.7	5.1	5.2	5.1	5.0	4.9	4.8
Growth (%)	34.0	24.6	18.1	29.3	20.4	20.2	17.6
Administrative expenses	(1,091)	(1,196)	(1,302)	(1,756)	(2,065)	(2,505)	(2,973)
Administrative expenses as % of revenue (%)	10.3	9.9	9.2	9.5	9.1	9.0	8.9
Growth (%)	0.4	9.6	8.9	34.8	17.6	21.3	18.7
Research and development costs	(739)	(809)	(930)	(1,249)	(1,534)	(1,881)	(2,258)
Research and development as % of revenue (%)	7.0	6.7	6.6	6.8	6.8	6.8	6.8
Growth (%)	30.3	9.4	15.0	34.3	22.8	22.7	20.0
Core operating profit	**919**	**961**	**1,157**	**956**	**1,173**	**1,716**	**2,292**
Growth (%)	26.3	4.6	20.4	(17.4)	22.8	46.3	33.6
Margin (%)	8.7	8.0	8.2	5.2	5.2	6.2	6.9
Other revenue (expenses) (Amortisation of intangible assets)	(68)	(59)	(44)	(48)	(50)	(50)	(50)
Operating profit (EBIT)	**850**	**902**	**1,113**	**908**	**1,123**	**1,666**	**2,242**
Growth (%)	31.7	6.1	23.4	(18.4)	23.7	48.3	34.6
Margin (%)	8.0	7.5	7.9	4.9	5.0	6.0	6.7
Other income	52	149	237	419	376	263	210
Interest income	12	29	76	-	59	59	59
Other gains (losses)	(6)	1	(15)	152	92	92	92
Impairment losses on expected credit loss model	(35)	(75)	(161)	(112)	(93)	(93)	(93)
Impairment loss on investment accounted for using the equity method	-	-	(16)	-	-	-	-
Impairment loss on goodwill	-	(36)	(22)	-	-	-	-
Loss from de-recognition of financial assets measured at amortised cost	(7)	(5)	(1)	(6)	(4)	(4)	(4)
Finance costs	(118)	(166)	(151)	(100)	(123)	(119)	(115)
Share of results of investments accounted for using the equity method	12	(0)	(24)	(10)	(12)	(12)	(12)
Profit before taxation	**760**	**799**	**1,035**	**1,252**	**1,419**	**1,854**	**2,381**
Growth (%)	20.2	5.1	29.5	21.0	13.4	30.6	28.4
Margin (%)	7.2	6.6	7.3	6.8	6.3	6.7	7.2
Income tax expenses	(44)	(42)	(87)	(115)	(108)	(145)	(191)
Effective tax rate (%)	5.8	5.3	8.4	9.2	7.6	7.8	8.0
Profit for the year	**716**	**757**	**948**	**1,137**	**1,311**	**1,708**	**2,190**
Growth (%)	28	6	25	20	15.3	30.3	28.2
Margin (%)	6.8	6.3	6.7	6.2	5.8	6.2	6.6
Non-controlling interests	0	2	(7)	(0)	3	3	4
Profit (loss) for the year attributable owners	**716**	**755**	**955**	**1,137**	**1,309**	**1,705**	**2,185**
Growth (%)	26.6	5.5	26.5	19.1	15.1	30.3	28.2
Margin (%)	6.8	6.3	6.8	6.2	5.8	6.2	6.6

Source: CLSA, Chinasoft Intl

Balance sheet

At a net-cash position

The company has been in a net-cash position in the past years, and reached Rmb3.6bn as of Dec-21. We expect Chinasoft Intl to further trend up its net-cash position in the forecast years (2022-24) as the business should receive stable revenue from the multinational corporates, where default rate should be low in theory. On 11 Apr 2022, the company announced a plan to repurchase up to 10% of share capital under a mandate to expire by 18 May 2022. We expect the company could end up repurchasing around 3% of share capital, translating to around Rmb445m.

Receivables days at 117 in 2021

Other than cash balance, trade and other receivables accounted for around 35-40% of the total assets, which we consider as substantial. We expect the trade and other receivables days to remain at the range of 97-110 days in 2022-24, largely in line with receivables days in 2021 at 117, given similar customer base.

Figure 68

Balance sheet, 2018-24CL

	FY18A	FY19A	FY20A	FY21A	FY22CL	FY23CL	FY24CL
ASSETS							
Non-current assets							
Property, plant and equipment	838	802	858	1,220	1,388	1,535	1,651
Intangible assets	148	127	145	193	220	258	306
Goodwill	1,006	974	941	844	844	844	844
Investments accounted for using the equity method	144	228	247	385	385	385	385
Right-of-use assets	-	279	334	628	722	795	874
Other receivable	30	66	87	27	27	27	27
Equity instruments at fair value	52	63	62	79	79	79	79
Pledged deposits	-	-	13	6	6	6	6
Deferred tax assets	9	8	6	3	3	3	3
Sub-total	**2,264**	**2,547**	**2,693**	**3,383**	**3,672**	**3,930**	**4,173**
Current assets							
Inventories	64	54	51	163	200	245	294
Trade and other receivables	2,585	3,297	4,580	5,894	6,762	7,711	8,760
Other current assets	1	-	-	-	-	-	-
Bills receivable	22	4	16	42	52	64	77
Contract assets	2,819	2,228	1,904	1,741	1,797	2,042	2,282
Amounts due from related companies	68	75	40	107	107	107	107
Pledged deposits	19	13	16	16	16	16	16
Cash and cash equivalents	2,646	2,526	3,787	5,556	5,660	6,396	7,571
Sub-total	**8,225**	**8,198**	**10,394**	**13,520**	**14,594**	**16,581**	**19,107**
Total assets	**10,488**	**10,745**	**13,087**	**16,902**	**18,265**	**20,511**	**23,280**
LIABILITIES							
Current labilities							
Trade and other payables	1,497	1,229	1,753	2,252	2,693	3,141	3,604
Bills payable	45	22	33	0	0	0	0
Contract liabilities	166	139	329	411	528	679	857
Amounts due to related parties	18	3	9	11	11	11	11
Dividend payable	0	0	0	0	0	0	0
Convertible loan notes	198	24	-	-	-	-	-
Taxation payable	125	84	83	181	181	181	181
Borrowings	1,676	1,523	368	917	917	917	917
Lease liabilities	-	126	142	214	214	214	214
Sub-total	**3,726**	**3,150**	**2,718**	**3,986**	**4,545**	**5,144**	**5,784**
Non-current liabilities							
Deferred tax liabilities	11	10	11	13	13	13	13
Other non-current liabilities	-	-	-	20	20	20	20
Convertible loan notes	720	728	-	-	-	-	-
Borrowings	-	200	1,421	1,021	1,021	1,021	1,021
Lease liabilities	-	124	160	236	236	236	236
Sub-total	**731**	**1,062**	**1,592**	**1,290**	**1,290**	**1,290**	**1,290**
Total liabilities	**4,457**	**4,211**	**4,311**	**5,276**	**5,835**	**6,434**	**7,074**
EQUITY							
Share capital	113	116	132	139	139	139	139
Share premium	2,982	3,145	4,735	6,294	5,948	5,948	5,948
Treasury shares	(76)	(471)	(605)	(589)	(589)	(589)	(589)
Reserves	2,948	3,677	4,492	5,760	7,007	8,651	10,774
Equity attributable to owners of the Company	5,967	6,468	8,753	11,604	12,405	14,049	16,173
Non-controlling interests	65	66	23	23	25	29	33
Total equity	**6,032**	**6,534**	**8,776**	**11,627**	**12,431**	**14,007**	**16,205**

Source: CLSA, Chinasoft Intl

Cashflow statement

Figure 69

Cashflow statement, 2018-24CL

(Rmbm)	FY18A	FY19A	FY20A	FY21CL	FY22CL	FY23CL	FY24CL
Operating activities							
Profit before taxation	**760**	**799**	**1,035**	**1,252**	**1,419**	**1,854**	**2,381**
Adjustments for:							
Depreciation of property, plant and equipment	122	138	127	103	108	122	136
Amortisation of intangible assets	69	59	44	45	48	51	54
Depreciation of right-of-use assets	-	106	159	83	157	181	199
Finance costs	118	166	151	100	123	119	115
Loss from de-recognition of financial assets measured at amortised cost	7	5	1	-	-	-	-
Impairment loss on goodwill	-	36	22	98	-	-	-
Share-based payment expenses	53	10	144	-	-	-	-
Impairment losses under expected credit loss model, net of reversal	35	75	161	-	-	-	-
Loss on disposal of property, plant and equipment	1	1	2	-	-	-	-
Others	-	-	(2)	-	-	-	-
Interest income	(12)	(29)	(76)	-	(59)	(67)	(79)
Share of results of associates	(12)	0	24	-	-	-	-
Exchange gains	(5)	(9)	(23)	-	-	-	-
Dividend received from equity instruments at fair value	-	(7)	-	-	-	-	-
(Gain) loss on fair value change of financial assets	-	5	(2)	-	-	-	-
Operating cash flows before movements in working capital	**1,137**	**1,354**	**1,769**	**1,681**	**1,796**	**2,259**	**2,804**
Increase (decrease) in amounts due to related companies	-	-	-	2	-	-	-
(Increase) decrease in contract assets	(241)	547	158	164	(56)	(245)	(240)
(Increase) decrease in bills receivable	(10)	18	(11)	(27)	(10)	(12)	(13)
Increase (decrease) in trade and other payables	(39)	(231)	556	499	442	448	462
Increase (decrease) in contract liabilities	103	(27)	192	82	17	151	178
(Increase) decrease in inventories	(38)	9	(2)	(111)	(37)	(45)	(49)
(Increase) decrease in trade and other receivables	(690)	(803)	(1,440)	(1,253)	(867)	(949)	(1,049)
Increase (decrease) in bills payable	25	(23)	11	(33)	0	0	0
(Increase) decrease in amounts due from related companies	(3)	(5)	3	(67)	-	-	-
Others	-	-	-	78	-	-	-
Cash generated from operations	**243**	**838**	**1,236**	**1,013**	**1,385**	**1,607**	**2,094**
Income taxes paid	(112)	(128)	(130)	(13)	(108)	(145)	(191)
Income taxes refunded	30	44	47	-	-	-	-
Net cash generated from operating activities	**161**	**754**	**1,153**	**1,001**	**1,276**	**1,462**	**1,902**
Investing activities							
Purchases of property, plant and equipment	(151)	(105)	(159)	(465)	(276)	(269)	(252)
Development costs paid	(37)	(38)	(60)	-	-	-	-
Purchase of other intangible assets	-	(1)	(1)	(93)	(75)	(90)	(101)
Payment for right-of-use assets	-	(2)	(2)	(377)	(252)	(253)	(278)
Payment for rental deposits	-	(6)	(19)	-	-	-	-
Other investing activities	3	(18)	39	17	-	-	-
Purchase of investments accounted for using the equity method	-	(85)	(55)	(137)	-	-	-
Interest received	12	27	63	-	59	67	79
Proceeds from disposal of property, plant and equipment	5	2	4	-	-	-	-
Net cash used in investing activities	**(167)**	**(224)**	**(192)**	**(1,057)**	**(543)**	**(545)**	**(552)**
Financing activities							
New borrowings raised, net of expenses	3,276	2,917	3,806	549	-	-	-
Proceeds from exercise of share options	109	-	607	-	-	-	-
Repayment of borrowings	(2,292)	(2,865)	(3,589)	-	-	-	-
Interest paid	-	-	-	(100)	(123)	(119)	(115)
Interest paid on convertible loan notes	(31)	(16)	(35)	-	-	-	-
Purchases of shares under share award scheme	(76)	(394)	(135)	17	-	-	-
Other financing activities	-	2	10	1,566	(445)	-	-
Repayment to related companies	(41)	(17)	(2)	(221)	-	-	-
Other interest paid	(54)	(109)	(84)	-	-	-	-
Dividend paid	(37)	(48)	(52)	-	-	-	-
Repayments of lease liabilities	-	(118)	(166)	76	-	-	-
Net cash generated from (used in) financing activities	**853**	**(650)**	**362**	**1,887**	**(568)**	**(119)**	**(115)**
Net increase (decrease) in cash and cash equivalents	847	(119)	1,323	1,831	165	798	1,236
Cash and cash equivalents at beginning of the period	**1,785**	**2,646**	**2,526**	**3,787**	**5,556**	**5,660**	**6,396**
Effect of foreign exchange rate changes	14	(1)	(62)	(62)	(62)	(62)	(62)
Cash and cash equivalents at end of the period	**2,646**	**2,526**	**3,787**	**5,556**	**5,660**	**6,396**	**7,571**

Source: CLSA, Chinasoft Intl

Initiate with BUY – an undervalued play

Initiate with a BUY rating at price target of HK$10.00

We initiate coverage of Chinasoft Intl with a BUY rating and a price target of HK$10.00 based on 14.5x 23CL PE, implying 66% upside to the latest share price. Our earnings are based on 23CL net profit attributable to equity shareholders; while the targeted multiple is in line with the company's 10-year historical 12-month forward trading PE average, given the policy tailwinds on digital economy, rising cloud usage, and the company's improving know-how and experience on IT services, yielding better brand recognition in China for IT services industry; yet offset by the relatively weak investment sentiment on tech stocks amid macro-economic uncertainty and policy overhang towards the growth sector in China.

PE is our primary valuation method

We use PE as the primary valuation method as the company (along with its peers) is a profit-making company with a clear earnings roadmap, and we understand that profitability improvement is the long-term strategic direction of the company

CSI is trading at a deep discount compared with peers and its 10-year trading average

The stock is trading at 9.0x 23CL PE, a 50% discount to its major domestic and global peers. CSI is trading at a deep discount to overseas peers like Tata Consultancy (70% discount); Infosys (65% discount); Accenture (64% discount) and IBM (31% discount), despite having a higher earnings Cagr. CSI is also trading at a 38% discount to its 10-year trading average. We attribute the low trading multiple to 1) macro-economic uncertainty because of interest rate hikes from the US, thus shifting investment towards defensive stocks or financial instruments; 2) a weak economy in China and 3) tension between the US and China on Huawei. However, the unchanged stance from the government towards digitalising the economy and promoting the concept of Information Innovation should defend the stock from dipping further. We are constructive on CSI's medium- to long-term outlook.

Factors to rerate the stock

Along with solid financials and government support on digitalisation leading to demand for IT services, Huawei's resolution on its software and IoT ecosystem, new progress and clearer financial visibility on HarmonyOS and smart vehicles and faster-than-expected revenue growth from other key accounts should all lead to rerating of the company.

Share repurchase plan announced on 11 Apr 2022

On 11 Apr 2022, the company announced a plan to repurchase up to 10% of share capital under a mandate set to expire by 18 May 2022 with a cap of HK$1.0bn. We expect the company could end up repurchasing around 3% of share capital. The stock is currently trading at a deep discount to its historical average; the aggressive share repurchase plan announced by the company reflects management's confidence in Chinasoft Intl's long-term business development.

Comparable selection:

- ❑ **Digital China (000034 SZ):** Leading cloud management and digital solution vendor in China. Main businesses include consumer and enterprise IT product distribution and cloud management
- ❑ **SIE Consulting (300687 SZ):** China-based company that provides enterprise information management software solutions and services. The company operates three businesses.
- ❑ **Accenture (ACN US):** One of the leading IT service companies in the world. It provides a range of services in strategy and consulting, interactive, technology, operations, network engineering, etc.

- **IBM (IBM US):** World-leading technology company with business segment including cloud and cognitive software, global business services (GBS), systems and global financing.
- **Infosys (INFY NS):** An Indian IT services company engaged in consulting, technology, outsourcing and next-generation digital services with exposure to various industries including consumer, financials and logistics.
- **TATA Consultancy (TCS NS):** An India-based company engaged in providing information technology (IT) services, digital and business solutions.

Figure 70

Peer comp

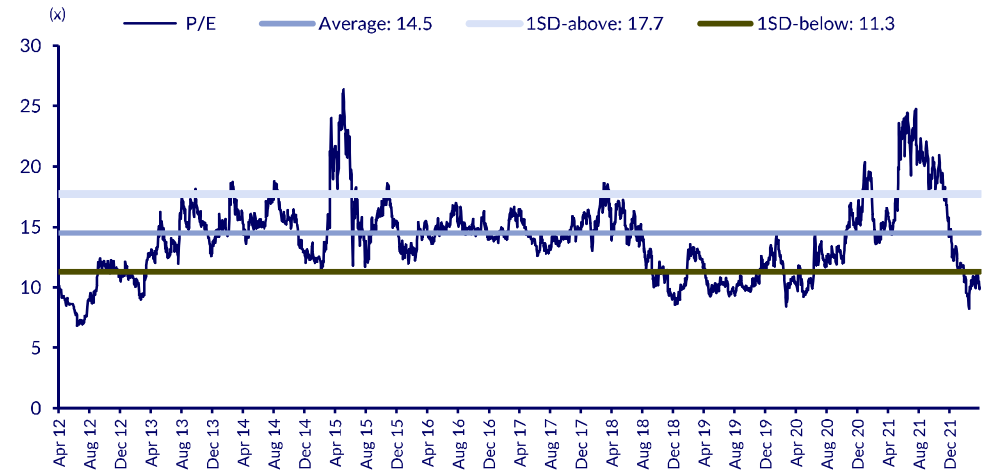
Company	Ticker	Last price (local ccy)	Mkt Cap (US$m)	3M ADTO (US$m)	PE CY22 (x)	PE CY23 (x)	Fwd 2/3year EPS Cagr	PEG 23 (x)	EV/Sales CY22 (x)	EV/Sales CY23 (x)	EV/EBITDA CY22 (x)	EV/EBITDA CY23 (x)
Chinasoft Intl	354 HK	6.01	2,323	13.7	11.7	9.0	25.0%	0.4	0.5	0.4	7.1	6.0
Digital China	000034 CH	13.23	1,333	32.6	9.1	7.2	na	na	0.2	0.2	13.2	10.9
SIE Consulting	300687 CH	18.71	1,137	11.7	20.3	14.4	na	na	2.6	1.9	19.9	14.3
Accenture	ACN US	303.10	200,784	298.3	28.1	25.0	11.7%	2.1	3.2	2.9	17.1	15.6
IBM	IBM US	136.19	122,477	642.4	14.1	13.1	6.2%	2.1	2.7	2.6	10.2	9.7
Infosys	INFY.NS	1,556.35	84,919	175.3	29.0	25.9	6.2%	4.2	2.7	2.6	10.2	9.7
TATA Consultancy	TCS.NS	3,560.00	171,837	134.9	34.6	30.2	13.5%	2.2	6.7	5.8	24.0	21.2
Average					**20.8**	**17.8**		**2.2**	**2.7**	**2.4**	**14.5**	**12.5**

Dated: 26 Apr 2022. Source: CLSA, Refinitiv

10-year average trading PE at 14.5x

Figure 71

10-year historical 12-month forward PE of Chinasoft Intl (354 HK)



Dated 26 Apr 2022: Source: CLSA, Refinitiv

Figure 72

Target price computation

	2023CL
CY23CL Net profit attributable to equity shareholders (Rmbm)	1,705
Targeted PE multiple (x)	14.5
Equity value (Rmbm)	24,724
Number of shares - diluted (m)	3,066
Exchange rate (US$/Rmb)	6.30
Exchange ratio (HK$/Rmb)	0.81
Target price (HK$)	10.00
Current share price (HK$)	6.01
Upside (%)	66%

Source: CLSA

Discounted cashflow (DCF) to cross-check with PE valuation

DCF target price at HK$12.40

We use the traditional DCF approach to cross-check our target price. The DCF price target is HK$12.40, implying a 2023CL PE of 18.0x.

WACC 10.9%

We use a 10.9% WACC based on a 4.0% risk-free rate, 7.0% equity-risk premium, and a 10% debt and 90% equity mix. Also, we use a 1.10 beta, which is the average among leading Chinese technology companies, including Hikvision, iFLYTEK, Sangfor Technologies and Yonyou. On terminal growth rate, we assume a 3% long-term growth rate, in line with the long-term consumer price index for China at 3%.

Estimated 1-3% revenue spent on capex, and moderate 8-9% effective tax rate

We expect the company to maintain capex at 1-3% of revenue as the company is not located in a PPE-heavy industry, and an effective tax rate around 8-9%, factoring in the tax benefit for technology companies in China.

Sensitivity analysis tells us the TP ranges from HK$10.00-16.50 under a base-case scenario

We also tested the key inputs for DCF analysis, the WACC and long-term growth rate. According to our base-case assumption of 10.9% WACC, a 2-4% long-term growth rate could provide a target price range of HK$11.40-13.70. Similarly, according to our base-case assumption of a 3% long-term growth rate, 8.9-12.9% could provide a target price range of HK$10.00-16.50.

Figure 73

Discounted cashflow

Rmbm		FY22CL	FY23CL	FY24CL	FY25CL	FY26CL	FY27CL
Revenue		22,588	27,707	33,248	39,055	44,913	50,701
Growth (%)		22.8	22.7	20.0	17.5	15.0	12.9
Ebitda		1,437	2,020	2,630	3,339	4,000	4,601
Growth (%)		16.1	40.6	30.2	27.0	19.8	15.0
Ebitda margin (%)		6.4	7.3	7.9	8.6	8.9	9.1
Working capital changes		(411)	(652)	(711)	(708)	(789)	(846)
WC as % of sales		(1.8)	(2.4)	(2.1)	(1.8)	(1.8)	(1.7)
Taxes		(108)	(145)	(191)	(250)	(307)	(362)
Tax rate (%)		7.6	7.8	8.0	8.2	8.4	8.6
Capex		(612)	(612)	(631)	(631)	(631)	(686)
Capex as % of sales		2.7	2.2	1.9	1.6	1.4	1.4
Free cash flow		305	611	1,097	1,750	2,272	2,707
Discount factor			0.90	0.81	0.73	0.66	0.60
Discounted value			551	892	1,284	1,503	1,615
PV cashflow 23-27CL	5,844						
Terminal value	35,340						
PV of terminal value	21,077						
Enterprise value	26,921						
Net cash FY22	3,722						
Equity value before NCI (Rmbm)	30,643						
Non-controlling interest	62						
Equity value (Rmbm)	30,705						
Implied PE CY23CL	18						
Number of shares (million)	3,066						
DCF value per share (Rmb)	10						
Exchange ratio (HK$/Rmb)	1						
DCF value per share (HK$)	12.4						
Assumptions							
Risk-free rate	4.0%						
Equity risk premium	7.0%						
Beta	1.10						
Cost of equity	11.7%						
Debt weighting	10.0%						
Cost of debt	4.0%						
Tax rate	7.8%						
WACC	10.9%						
Long term growth	3.0%						

Source: CLSA, Chinasoft Intl

Sensitivity analysis on WACC and terminal growth rate

Figure 74

DCF sensitivity analysis

DCF TP: HK$12.7		Terminal growth rate				
		2.0%	2.5%	3.0%	3.5%	4.0%
	12.9%	9.6	9.9	10.2	10.6	11.0
	11.9%	10.5	10.9	11.3	11.8	12.3
WACC	10.9%	11.7	12.2	12.7	13.4	14.1
	9.9%	13.1	13.8	14.5	15.4	16.4
	8.9%	15.0	15.9	17.0	18.2	19.7

Source: CLSA

Investment risks

Five major investment risks

We believe the primary investment risks come from 1) uncertainties on Huawei; 2) uncertainties from development of new products and services; 3) risk of greater competition; 4) risk of economic downturn; and 5) risk from Covid-19 pandemic.

Heavy reliance on Huawei

1) Uncertainties on Huawei: Huawei contributed around 53% of CSI's revenue in 2021. Any unfavourable factors arising from Huawei or any breach in cooperation between CSI and Huawei could severely impact the entire business.

- **Possible business downturn at Huawei:** Sanctions from the US put near-term pressure on Huawei's consumer hardware business. Continued tension between US and China might lead to further disturbance of Huawei's operations. However, China's initiatives should provide continued support to Huawei. That said, a deteriorated operating environment might worsen top-line and bottom-line performance, which could in turn lead to a slowdown in its R&D budget that impacts CSI's IT services business.

- **Risk from decayed cooperation with Huawei:** Currently, CSI is taking 55-60% share of Huawei's IT outsourcing budget. If Huawei develops strong strategic cooperation with other suppliers, this might severely impact CSI's company's business.

R&D and new services

2) Uncertainties from development of new products and services: CSI is expending resources on emerging businesses, including Huawei's new initiatives including HarmonyOS and smart driving. If the progress of these new business lines is dragged, either due to its own R&D capabilities or the slowdown of business from Huawei and other partners, Chinasoft Intl's development strategy could be interrupted.

Competition from other IT services providers

3) Risks from greater competition: Outsourced IT services are mainly used for the non-core R&D part of an enterprise. The technology barrier of this industry is usually not very high. Thus, CSI's leading position might be hurt if competition becomes fiercer when market players provide homogenised services and products.

Weak macro economy or domestic economy

4) Risk of economic downturn: During an economic downturn, enterprises tend to shrink their scale and cut off middle office administrative expenses such as IT expenses, or postpone any IT-related projects to save costs. This poses downside risk to CSI as the company is aiming to gain higher revenue contribution from key accounts outside Huawei to sustain its top-line performance.

Covid-19 pandemic

5) Risks from the Covid-19 pandemic: The ongoing Covid-19 pandemic in China could slow down services delivery to customers. But with experience working remotely, and the heavy technology nature of the company, CSI is committed to deliver quality services as scheduled with the customers.

Appendix 1: Company background

Figure 75

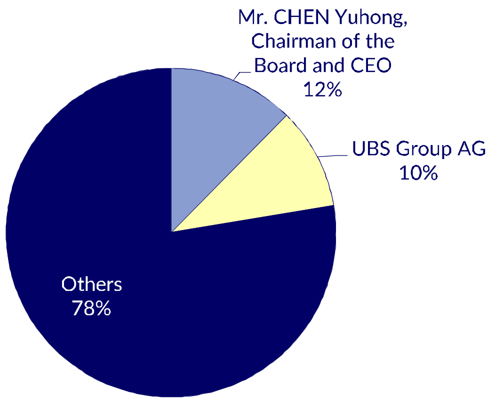
Chinasoft Intl company history

Years	Company history
Before 2005	- Chinasoft Intl Limited was established in 2000 - Listed on the Growth Enterprise Market of the Hong Kong Stock Exchange with the stock code 8216 HK - Acquired Chinasoft Intl Computer Training Centre to start the IT training business - Acquired Chinasoft Intl Resources to enter the IT outsourcing service business in Europe and America - Investment by Microsoft and IFC - Released the ResourceOne V1.0 platform to support independent intellectual rights applications in 2000 - Implemented ResourceOne V2.0 and V3.0, and gained attention in the auditing industry - Applying ResourceOne as the basic platform in the tobacco industry for over 100+ corporates
2006	- Entered business relationship with Microsoft, which enhanced the capacity for embedded software services
2007	- Expanded in the field of online auditing, internal auditing for state-owned corporations and food & drug administration - Acquired Hinge Global Resource Inc. and extended services in the financial and banking services industry - Released V4.0 of ResourceOne;
2008	- Listed on the main board of the Hong Kong Stock Exchange with a stock code of 354 HK - Established the Chinasoft Intl SOA innovation centre with IBM
2009	- Became the seventh Microsoft Premier Vendor in the world, and the first in China
2010	- Number of employees exceeded 10,000 - Top-3 market share from Huawei-specific services - Entered into the field of mobile Internet with MMIM Technologies Co. Ltd - ResourceOne began to support cloud computing;
2011	- Became a top-10 strategic supplier for Microsoft - Strengthened cooperation with Huawei, with No. 1 overall ranking in supplier evaluations and each product line - Successfully achieved the cooperation framework with Huawei to enter the markets in Singapore, Russia, Europe and other countries
2012	- Incorporated a high-tech park in Xi'An with Huawei - Signed strategic cooperation agreement with Ali Cloud to jointly develop PaaS platform and apply ResourceOne middleware
2013	- Acquired Catapult Systems, a consulting service provider specialised in Microsoft Business
2014	- Launched Jointforce platform
2015	- Announced the establishment of Technical and Professional Services Group (TPG) and Internet IT Services Group (IIG) - Signed a stock subscription and acquisition agreement with Huawei, and Huawei became its strategic shareholder - Catapult Systems developed the enterprise cloud portal Fuse based on Microsoft Azure
2016	- Established the big data joint-innovation lab with Huawei
2017	- Obtained long-term investment from Danhe Capital led by Chen Yidan; - Signed a contract with Huawei Cloud to become the first cooperation partner - Signed a strategic cooperation agreement with Baidu to develop AI technology
2019	- Released financial big data intelligent application solution jointly with Huawei
2020	- Launched Joint Innovation camp with Huawei on the topic of IoV - Jointforce Huawei Harmony Joint Innovation camp expanded to Zhengzhou and Wenzhou - Launched the cloud brokerage platform Huaxia Cloud - Became the partner of Harmony HiLink ecosystem - Launched the Software Factory to standardise the business flow and technology know-how
2021	- Cooperated with Tsinghua University, GAC Zhilian, and GAC Intelligent Control to explore further explore the IoV field - Launched Shen Kai Hong to expand the services on HarmonyOS and OpenHarmony project

Source: CLSA, Chinasoft Intl

Figure 76

Shareholding structure, 1Q2022



Source: CLSA, HKEX

Valuation details

We base our price target of HK$10.00 on 14.5x 23CL PE. Our earnings are based on 23CL net profit attributable to equity shareholders. The target multiple is in line with the company's 10-year historical 12-month forward trading PE average, given the policy tailwinds on digital economy, rising cloud usage, and the company's improving know-how and experience on IT services, yielding a better brand recognition in China for the IT services industry, yet offset by the relatively weak investment sentiment on tech stocks amid macro-economic uncertainty and policy overhang towards the growth sector in China.

Investment risks

We believe the primary investment risks come from 1) uncertainties on Huawei; 2) uncertainties from new products/services development; 3) risk of greater competition; 4) risk of economic downturn; and 5) risk from Covid-19 pandemic that delays delivery of services.

Figure 77

Earnings and balance-sheet risk scores (lower the better)

	Score	Comments
Earnings-quality flags		
Capex indiscipline	1	
Cash burn	0	
Rising non-core or intangibles	1	Goodwill and intangible assets arising mainly from software and acquisition of subsidiaries
Rising working capital	1	Receivables days were around 117 days in 2021, we expect this to trend down in 2022-24CL
Poor cash conversion	0	
Earnings-quality risk score (EQRS)	**3/5**	
Balance-sheet-quality flags		
Cash burn	0	
Excessive leverage	0	
Frequent fundraising	0	
Liquidity concerns	0	
Operational stress	1	
Balance-sheet-quality risk score (BQRS)	**1/5**	

Source: CLSA

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Detailed financials

Profit & Loss (Rmbm)

Year to 31 December	2018A	2019A	2020A	2021A	2022CL	2023CL	2024CL
Revenue	**10,585**	**12,042**	**14,101**	**18,398**	**22,588**	**27,707**	**33,248**
Cogs (ex-D&A)	(7,149)	(8,156)	(9,654)	(13,262)	(16,367)	(19,885)	(23,731)
Gross Profit (ex-D&A)	**3,436**	**3,886**	**4,448**	**5,136**	**6,221**	**7,822**	**9,517**
Research & development costs	(739)	(809)	(930)	(1,249)	(1,534)	(1,881)	(2,258)
Selling & marketing expenses	(496)	(618)	(729)	(943)	(1,136)	(1,365)	(1,605)
Other SG&A	(1,091)	(1,196)	(1,302)	(1,756)	(2,065)	(2,505)	(2,973)
Other Op Expenses ex-D&A	-	-	-	-	-	-	-
Op Ebitda	**1,110**	**1,264**	**1,486**	**1,188**	**1,487**	**2,070**	**2,681**
Depreciation/amortisation	(192)	(303)	(329)	(232)	(313)	(354)	(388)
Op Ebit	**919**	**961**	**1,157**	**956**	**1,173**	**1,716**	**2,292**
Interest income	12	29	76	0	59	59	59
Interest expense	(118)	(166)	(151)	(100)	(123)	(119)	(115)
Net interest inc/(exp)	(106)	(137)	(76)	(100)	(63)	(59)	(56)
Associates/investments	-	-	-	-	-	-	-
Forex/other income	-	-	-	-	-	-	-
Asset sales/other cash items	52	149	237	419	376	263	210
Provisions/other non-cash items	(104)	(174)	(283)	(23)	(67)	(67)	(67)
Asset revaluation/Exceptional items	-	-	-	-	-	-	-
Profit before tax	**760**	**799**	**1,035**	**1,252**	**1,419**	**1,854**	**2,381**
Taxation	(44)	(42)	(87)	(115)	(108)	(145)	(191)
Profit after tax	**716**	**757**	**948**	**1,137**	**1,311**	**1,708**	**2,190**
Preference dividends	-	-	-	-	-	-	-
Profit for period	**716**	**757**	**948**	**1,137**	**1,311**	**1,708**	**2,190**
Minority interest	0	(2)	7	0	(3)	(3)	(4)
Net profit	**716**	**755**	**955**	**1,137**	**1,309**	**1,705**	**2,185**
Extraordinaries/others	0	0	0	0	0	0	0
Profit avail to ordinary shares	716	755	955	1,137	1,309	1,705	2,185
Dividends	(37)	(48)	(52)	(70)	(81)	(105)	(135)
Retained profit	679	707	903	1,067	1,228	1,600	2,051
Adjusted profit	**716**	**755**	**955**	**1,137**	**1,309**	**1,705**	**2,185**
EPS (Rmb)	0.3	0.3	0.3	0.4	0.4	0.6	0.7
Adj EPS [pre excep] (Rmb)	0.3	0.3	0.3	0.4	0.4	0.6	0.7
Core EPS (Rmb)	0.3	0.3	0.3	0.4	0.4	0.6	0.7
DPS (Rmb)	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Profit & loss ratios

Year to 31 December	2018A	2019A	2020A	2021A	2022CL	2023CL	2024CL
Growth (%)							
Revenue growth (% YoY)	14.5	13.8	17.1	30.5	22.8	22.7	20.0
Ebitda growth (% YoY)	22.7	13.8	17.6	(20.1)	25.2	39.2	29.5
Ebit growth (% YoY)	26.3	4.6	20.4	(17.4)	22.8	46.3	33.6
Net profit growth (%)	26.6	5.5	26.5	19.1	15.1	30.3	28.2
EPS growth (% YoY)	19.4	9.9	20.6	12.5	11.2	30.3	28.2
Adj EPS growth (% YoY)	19.4	9.9	20.6	12.5	11.2	30.3	28.2
DPS growth (% YoY)	19.4	1.9	32.4	7.7	7.5	30.3	28.2
Core EPS growth (% YoY)	19.4	9.9	20.6	12.5	11.2	30.3	28.2
Margins (%)							
Gross margin (%)	32.5	32.3	31.5	27.9	27.5	28.2	28.6
Ebitda margin (%)	10.5	10.5	10.5	6.5	6.6	7.5	8.1
Ebit margin (%)	8.7	8.0	8.2	5.2	5.2	6.2	6.9
Net profit margin (%)	6.8	6.3	6.8	6.2	5.8	6.2	6.6
Core profit margin	6.8	6.3	6.8	6.2	5.8	6.2	6.6
Op cashflow margin	1.5	6.3	8.2	5.4	5.7	5.3	5.7
Returns (%)							
ROE (%)	12.9	12.1	12.5	11.2	10.9	12.9	14.5
ROA (%)	9.0	8.6	8.9	5.8	6.2	8.2	9.6
ROIC (%)	16.3	15.1	16.2	11.9	13.1	17.5	21.1
ROCE (%)	16.9	15.7	17.5	12.9	14.0	18.7	22.7
Other key ratios (%)							
Effective tax rate (%)	5.8	5.3	8.4	9.2	7.6	7.8	8.0
Ebitda/net int exp (x)	10.5	9.2	19.6	11.9	23.5	34.8	48.2
Exceptional or extraord. inc/PBT (%)	-	-	-	-	-	-	-
Dividend payout (%)	6.7	6.2	6.9	6.6	6.4	6.4	6.4

Source: www.clsa.com

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Balance sheet (Rmbm)

Year to 31 December	2018A	2019A	2020A	2021A	2022CL	2023CL	2024CL
Cash & equivalents	2,646	2,526	3,787	5,556	5,660	6,396	7,571
Accounts receivable	2,585	3,297	4,580	5,894	6,762	7,711	8,760
Inventories	64	54	51	163	200	245	294
Other current assets	2,929	2,321	1,976	1,906	1,972	2,229	2,482
Current assets	**8,225**	**8,198**	**10,394**	**13,520**	**14,594**	**16,581**	**19,107**
Fixed assets	838	802	858	1,220	1,388	1,535	1,651
Investments	144	228	247	385	385	385	385
Goodwill	1,006	974	941	844	844	844	844
Other intangible assets	148	127	145	193	220	258	306
Other non-current assets	127	416	502	741	836	908	988
Total assets	**10,488**	**10,745**	**13,087**	**16,902**	**18,265**	**20,511**	**23,280**
Short term loans/OD	1,676	1,523	368	917	917	917	917
Accounts payable	1,497	1,229	1,753	2,252	2,693	3,141	3,604
Accrued expenses	-	-	-	-	-	-	-
Taxes payable	125	84	83	181	181	181	181
Other current liabs	428	314	514	636	753	904	1,082
Current liabilities	**3,726**	**3,150**	**2,718**	**3,986**	**4,545**	**5,144**	**5,784**
Long-term debt/leases/other	-	200	1,421	1,021	1,021	1,021	1,021
Convertible bonds	720	728	0	0	0	0	0
Provisions/other LT liabs	11	134	171	269	269	269	269
Total liabilities	**4,457**	**4,211**	**4,311**	**5,276**	**5,835**	**6,434**	**7,074**
Share capital	3,095	3,262	4,867	6,432	5,987	5,987	5,987
Retained earnings	2,948	3,677	4,492	5,760	7,007	8,651	10,774
Reserves/others	(76)	(471)	(605)	(589)	(589)	(589)	(589)
Shareholder funds	**5,967**	**6,468**	**8,753**	**11,604**	**12,405**	**14,049**	**16,173**
Minorities/other equity	65	66	23	23	25	29	33
Total equity	**6,032**	**6,534**	**8,776**	**11,627**	**12,431**	**14,077**	**16,205**
Total liabs & equity	**10,488**	**10,745**	**13,087**	**16,902**	**18,265**	**20,511**	**23,280**
Total debt	2,396	2,451	1,790	1,938	1,938	1,938	1,938
Net debt	(251)	(75)	(1,997)	(3,618)	(3,722)	(4,458)	(5,632)
Adjusted EV	13,710	13,899	12,729	10,779	11,273	10,539	9,370
BVPS (Rmb)	2.1	2.4	3.1	3.9	4.0	4.6	5.3

Balance sheet ratios

Year to 31 December	2018A	2019A	2020A	2021A	2022CL	2023CL	2024CL
Key ratios							
Current ratio (x)	2.2	2.6	3.8	3.4	3.2	3.2	3.3
Growth in total assets (% YoY)	19.8	2.5	21.8	29.2	8.1	12.3	13.5
Growth in capital employed (% YoY)	13.7	11.7	5.0	18.1	8.7	10.5	9.9
Net debt to operating cashflow (x)	-	-	-	-	-	-	-
Gross debt to operating cashflow (x)	14.9	3.2	1.6	1.9	1.5	1.3	1.0
Gross debt to Ebitda (x)	2.2	1.9	1.2	1.6	1.3	0.9	0.7
Net debt/Ebitda (x)	-	-	-	-	-	-	-
Gearing							
Net debt/equity (%)	(4.2)	(1.1)	(22.8)	(31.1)	(29.9)	(31.7)	(34.8)
Gross debt/equity (%)	39.7	37.5	20.4	16.7	15.6	13.8	12.0
Interest cover (x)	7.9	6.0	8.1	9.6	10.1	15.0	20.5
Debt cover (x)	0.1	0.3	0.6	0.5	0.7	0.8	1.0
Net cash per share (Rmb)	0.1	0.0	0.7	1.2	1.2	1.5	1.8
Working capital analysis							
Inventory days	2.2	2.5	1.9	2.9	4.0	4.0	4.1
Debtor days	78.4	89.2	102.0	103.9	102.3	95.3	90.4
Creditor days	76.6	58.8	54.5	54.2	54.1	52.6	51.0
Working capital/Sales (%)	33.3	33.6	30.2	26.6	23.5	21.5	20.1
Capital employed analysis							
Sales/Capital employed (%)	183.1	186.4	208.0	229.7	259.4	288.0	314.5
EV/Capital employed (%)	237.2	215.2	187.8	134.6	129.4	109.6	88.6
Working capital/Capital employed (%)	61.0	62.6	62.8	61.1	60.9	61.9	63.1
Fixed capital/Capital employed (%)	14.5	12.4	12.7	15.2	15.9	16.0	15.6
Other ratios (%)							
PB (x)	2.4	2.2	1.7	1.3	1.2	1.1	0.9
EV/Ebitda (x)	12.3	11.0	8.6	9.1	7.6	5.1	3.5
EV/OCF (x)	85.0	18.4	11.0	10.8	8.8	7.2	4.9
EV/FCF (x)	1,277.9	21.5	12.9	165.6	16.7	12.4	7.4
EV/Sales (x)	1.3	1.2	0.9	0.6	0.5	0.4	0.3
Capex/depreciation (%)	123.0	43.8	57.0	501.3	227.0	202.1	188.8

Source: www.clsa.com

evalu@tor
The Global Equities Database

Cashflow (Rmbm)

Year to 31 December	2018A	2019A	2020A	2021A	2022CL	2023CL	2024CL
Operating profit	919	961	1,157	956	1,173	1,716	2,292
Operating adjustments	(158)	(162)	(122)	296	246	137	88
Depreciation/amortisation	192	303	329	232	313	354	388
Working capital changes	(894)	(516)	(533)	(668)	(411)	(652)	(711)
Interest paid / other financial expenses	-	-	-	-	-	-	-
Tax paid	(82)	(84)	(83)	(13)	(108)	(145)	(191)
Other non-cash operating items	185	252	405	197	63	52	36
Net operating cashflow	161	754	1,153	1,001	1,276	1,462	1,902
Capital expenditure	(151)	(107)	(163)	(936)	(602)	(612)	(631)
Free cashflow	11	647	990	65	674	850	1,271
Acq/inv/disposals	0	5	(98)	(50)	(121)	-	-
Int, invt & associate div	(17)	(122)	69	(70)	180	67	79
Net investing cashflow	(167)	(224)	(192)	(1,057)	(543)	(545)	(552)
Increase in loans	984	52	217	549	0	0	0
Dividends	(37)	(48)	(52)	0	0	0	0
Net equity raised/others	(94)	(653)	196	1,338	(568)	(119)	(115)
Net financing cashflow	853	(650)	362	1,887	(568)	(119)	(115)
Incr/(decr) in net cash	847	(119)	1,323	1,831	165	798	1,236
Exch rate movements	14	(1)	(62)	(62)	(62)	(62)	(62)
Opening cash	1,785	2,646	2,526	3,787	5,556	5,660	6,396
Closing cash	2,646	2,526	3,787	5,556	5,660	6,396	7,571
OCF PS (Rmb)	0.1	0.3	0.4	0.3	0.4	0.5	0.6
FCF PS (Rmb)	0.0	0.2	0.4	0.0	0.2	0.3	0.4

Cashflow ratio analysis

Year to 31 December	2018A	2019A	2020A	2021A	2022CL	2023CL	2024CL
Growth (%)							
Op cashflow growth (% YoY)	(51.4)	367.9	52.8	(13.2)	27.5	14.5	30.1
FCF growth (% YoY)	(93.8)	5,934.9	52.9	(93.4)	935.6	26.1	49.6
Capex growth (%)	(6.0)	(28.9)	52.2	474.8	(35.7)	1.6	3.1
Other key ratios (%)							
Capex/sales (%)	1.4	0.9	1.2	5.1	2.7	2.2	1.9
Capex/op cashflow (%)	93.3	14.2	14.1	93.5	47.2	41.9	33.2
Operating cashflow payout ratio (%)	29.9	6.3	5.7	7.5	6.5	7.4	7.3
Cashflow payout ratio (%)	22.9	6.4	4.5	7.0	6.3	7.2	7.1
Free cashflow payout ratio (%)	343.7	7.4	5.2	107.7	12.0	12.4	10.6

DuPont analysis

Year to 31 December	2018A	2019A	2020A	2021A	2022CL	2023CL	2024CL
Ebit margin (%)	8.7	8.0	8.2	5.2	5.2	6.2	6.9
Asset turnover (x)	1.1	1.1	1.2	1.2	1.3	1.4	1.5
Interest burden (x)	0.8	0.8	0.9	1.3	1.2	1.1	1.0
Tax burden (x)	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Return on assets (%)	9.0	8.6	8.9	5.8	6.2	8.2	9.6
Leverage (x)	1.7	1.7	1.6	1.5	1.5	1.5	1.4
ROE (%)	12.9	12.1	12.5	11.2	10.9	12.9	14.5

EVA® analysis

Year to 31 December	2018A	2019A	2020A	2021A	2022CL	2023CL	2024CL
Ebit adj for tax	865	910	1,060	868	1,084	1,582	2,108
Average invested capital	5,307	6,006	6,534	7,298	8,243	9,049	9,981
ROIC (%)	16.3	15.1	16.2	11.9	13.1	17.5	21.1
Cost of equity (%)	12.4	12.4	12.4	12.4	12.4	12.4	12.4
Cost of debt (adj for tax)	3.8	3.8	3.7	3.6	3.7	3.7	3.7
Weighted average cost of capital (%)	11.6	11.6	11.6	11.6	11.6	11.6	11.6
EVA/IC (%)	4.7	3.5	4.6	0.3	1.5	5.9	9.5
EVA (Rmbm)	249	212	302	21	127	532	950

Source: www.clsa.com

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Companies mentioned

Chinasoft Intl (354 HK - HK$6.01 - BUY)
(N-R)
Accenture (N-R)
AIA (1299 HK - HK$75.00 - BUY)
Alibaba (BABA US - US$86.49 - BUY)
Amazon Web Service (N-R)
Baidu (BIDU US - US$114.57 - BUY)
Beiasoft (N-R)
BMC Software (N-R)
Bosch (N-R)
Bytedance (N-R)
CA teachnologies (N-R)
CCB - A (601939 CH - RMB6.10 - O-PF)
China Mobile (941 HK - HK$52.30 - BUY)
China Telecom (728 HK - HK$2.90 - BUY)
Cloudwise (N-R)
CRCC - A (N-R)
CS&S (N-R)
Dell (N-R)
DHC Software (N-R)
Digital China (N-R)
EHSY (N-R)
EPWK (N-R)
GAC - A (N-R)
Gartner (N-R)
Haier (600690 CH - RMB23.77 - BUY)
Hand Enterprise (N-R)
Hikvision (N-R)
Homedo (N-R)
Honour (N-R)
HP (N-R)
HP Enterprise (N-R)
HSBC (N-R)
Huawei
IBM (N-R)
iFLYTEK (002230 CH - RMB35.12 - BUY)
Infosys (INFO IB - RS1,585.7 - BUY)
Insigma (N-R)
Inspur Info (N-R)
iResearch (N-R)
iSoftStone (N-R)
JD.com (JD US - US$52.04 - BUY)
Kaimacode (N-R)
Kingdee Software (268 HK - HK$13.76 - BUY)
Lenovo (992 HK - HK$7.45 - O-PF)
Meituan (3690 HK - HK$138.60 - BUY)
Microsoft (N-R)
NetEase (NTES US - US$85.86 - BUY)

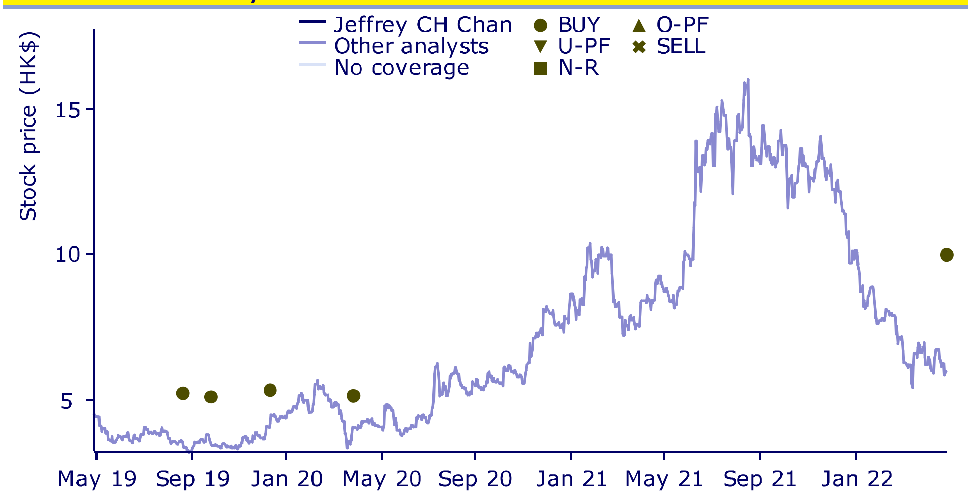
Neusoft (N-R)
Oracle (N-R)
Ping An (2318 HK - HK$50.60 - BUY)
Pingyun Craftsman (N-R)
Proginn (N-R)
Rizhiyi (N-R)
Salesforce.com (N-R)
Sangfor Technologies (N-R)
SAP (N-R)
Shen Kai Hong (N-R)
SIE Consulting (N-R)
Strategic (N-R)
Sunyur (N-R)
Taiji (N-R)
Tata Consultancy (TCS IB - RS3,611.8 - O-PF)
Teamsun (N-R)
Tencent (700 HK - HK$327.40 - BUY)
Tianyi Cloud (N-R)
Tingyun (N-R)
Ultrapower (N-R)
Vastdata (N-R)
Workday (N-R)
Yonyou (600588 CH - RMB17.83 - BUY)
ZBJ (N-R)
Zencor (N-R)
ZKH (N-R)
ZTE (N-R)

Analyst certification

The analyst(s) of this report hereby certify that the views expressed in this research report accurately reflect my/our own personal views about the securities and/or the issuers and that no part of my/our compensation was, is, or will be directly or indirectly related to the specific recommendation or views contained in this research report.

Important disclosures

Recommendation history of Chinasoft Intl 354 HK



Date	Rec	Target	Date	Rec	Target
LATEST	BUY	10.00	11 Dec 2019	BUY	5.36
28 Jan 2021	Dropped Coverage		26 Sep 2019	BUY	5.13
27 Mar 2020	BUY	5.17	21 Aug 2019	BUY	5.25

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