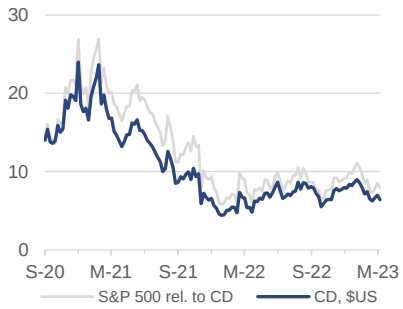
Key data

Market Cap, $ bn	2.38
Enterprise Value, $ bn	3.00
Enterprise Value/EBITDA'22, x	9.8
Share price, $	6.05
Fair value estimate, $	9.86
Upside, %	63%

Source: Yahoo! Finance, own analysis

Share price performance



Source: Yahoo! Finance

Financials (RMB bn)

	2021	2022	2023E	2024E	2025E
Revenue	2.85	4.55	5.88	7.41	9.06
% growth	56%	60%	29%	26%	22%
GP	1.20	1.89	2.46	3.10	3.79
% margin	42%	42%	42%	42%	42%
EBITDA	1.30	2.12	2.79	3.53	4.36
% margin	46%	47%	48%	48%	48%
FCF	(2.89)	(3.96)	(1.25)	(0.65)	0.01
Cash	5.24	4.06	2.81	2.16	2.17
Debt	5.48	8.37	8.37	8.37	8.37
ND/EBITDA	0.2x	2.0x	2.0x	1.8x	1.4x

Source: Company data, own analysis

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Winning the APAC data center economy

Chindata Group (NASDAQ GS: CD) is a major developer, owner and operator of hyperscale data centers with a strong presence in China and other Asia's emerging markets. Founded in 2015, the company today ranks fourth in revenue and second in EBITDA among China's publicly-traded career-neutral data center providers. The company currently operates 32 facilities and serves ByteDance (famous for TikTok), Tencent (QQ, WeChat), Microsoft, and other undisclosed internet giants expanding their IT footprint. While there is no doubt that the demand for IT capacity will continue to grow, there seems to be a recognition that not all capacity is equal and that there will be winners and losers in the data center market. I believe that the ability to provide scalable data center capacity that meets tightening operational and environmental standards at a competitive price puts Chindata in the winners' camp.

Key highlights

(1) Hyperscale surge and Chindata's dominance: The rise of internet giants (so-called hyperscalers) has created an unprecedented wave of demand for modern IT capacity, forming a $200 bn hyperscale infrastructure market. With 32 data centers, solid revenue figures, and over 400 clients, Chindata has solidified its position as a hyperscale data center technology leader in APAC and has proven its ability to deliver infrastructure suited for modern applications.

(2) Growing cloud capex igniting Chindata's trajectory: Being the main driver of Chindata's business, cloud capex by Chinese hyperscalers is expected to grow by 50% in 2023. I believe this cloud acceleration trend is likely to be sustained for longer, supported by secular technology trends, the international expansion of Chinese internet giants, and the digitalization of China's economy.

(3) Green innovation in strategic locales: Instead of building out coal-powered facilities, Chindata locates its data centers in areas that are closer to renewable energy sources. It is highly consistent with both the green capex investment theme and the restrictive government policies that are coming into play. Construction rights to 2.75 mn sqm of land in power-rich locations suggest tailwinds from an improved competitive position, as most of the company's peers focus on areas with limited new construction.

(4) Established economic moat: One element ensuring the durability of Chindata's operations is the price advantage and shorter delivery times that are backed by patented engineering innovation. These characteristics help attract new clients, providing resources for the next innovation cycle, which further improves the company's position. The second element is based on strict long-term contracts with companies that have strong market positions, indicating a degree of cash flow visibility that many other technology companies do not have.

Valuation

The stock is trading at 9.8x EV/EBITDA'22, vs. the US peer average of 26.2x and China peer average of 13.4x. Considering Chindata's leading growth profile and strong market position, I find it reasonable to expect the valuation multiple expansion. However, for my conservative scenario, I assume no material multiple expansion (I use 10x EBITDA'25 as an exit multiple) in my 3-year DCF model to arrive at a fair value estimate of $9.86.

Chindata Group (NASDAQ GS: CD) – Financial Forecast

Price, $	6.05
Fair value estimate, $	9.86
Upside, %	63%
Price as of Apr 26, 2023	

Key Data

Market cap	$2.38bn
Enterprise value	$3.00bn
EV/EBITDA'22	9.79x
EV/EBITDA'23E	7.42x

Income Statement (RMB mn)	2020	2021	2022	2023E	2024E	2025E
Total revenue	**1,831**	**2,852**	**4,552**	**5,879**	**7,409**	**9,056**
% growth	*67%*	*56%*	*60%*	*29%*	*26%*	*22%*
Cost of goods sold	1,098	1,653	2,659	3,418	4,307	5,265
Gross profit	**733**	**1,200**	**1,893**	**2,461**	**3,102**	**3,791**
% margin	*40%*	*42%*	*42%*	*42%*	*42%*	*42%*
Opex	705	524	704	859	935	962
Operating income	28	675	1,188	1,602	2,167	2,829
% margin	*2%*	*24%*	*26%*	*27%*	*29%*	*31%*
Others	33	(32)	(59)	0	0	0
Interest expense	211	236	301	398	398	398
Pre-tax profit	(216)	471	946	1,204	1,769	2,431
Income tax	67	154	294	301	442	608
Net income	**(283)**	**316**	**652**	**903**	**1,327**	**1,824**
EBITDA	**410**	**1,302**	**2,117**	**2,793**	**3,533**	**4,357**
% margin	*22%*	*46%*	*47%*	*48%*	*48%*	*48%*

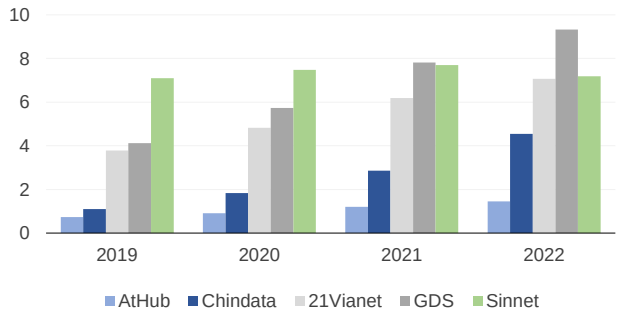
Balance Sheet (RMB mn)	2020	2021	2022	2023E	2024E	2025E
Total assets	**16,260**	**18,682**	**23,100**	**24,004**	**25,330**	**27,154**
Property and equipment	6,424	9,428	13,369	15,523	17,502	19,320
Accounts receivable	422	661	1,938	1,938	1,938	1,938
Cash	6,912	5,241	4,064	2,813	2,161	2,167
Goodwill and intangible assets	793	779	793	793	793	793
Others	1,709	2,574	2,936	2,936	2,936	2,936
Total liabilities	**6,520**	**8,567**	**12,191**	**12,191**	**12,191**	**12,191**
Debt	4,189	5,477	8,372	8,372	8,372	8,372
Net Debt to EBITDA	*n/m*	*0.18x*	*2.03x*	*1.99x*	*1.76x*	*1.42x*
Accounts payable	1,186	1,701	2,420	2,420	2,420	2,420
Others	1,145	1,389	1,399	1,399	1,399	1,399
Shareholders' equity	**9,740**	**10,115**	**10,910**	**11,813**	**13,140**	**14,963**

Cash Flow (RMB mn)	2020	2021	2022	2023E	2024E	2025E
Cash flow from operations	665	1,066	859	2,095	2,693	3,351
Cash flow from investing	(2,769)	(3,953)	(4,815)	(3,346)	(3,346)	(3,346)
Cash flow from financing	8,189	1,293	2,661	0	0	0
FX	(293)	(76)	118	0	0	0
CFO-CAPEX	(2,104)	(2,888)	(3,955)	(1,251)	(652)	6

Source: Company data, own estimates

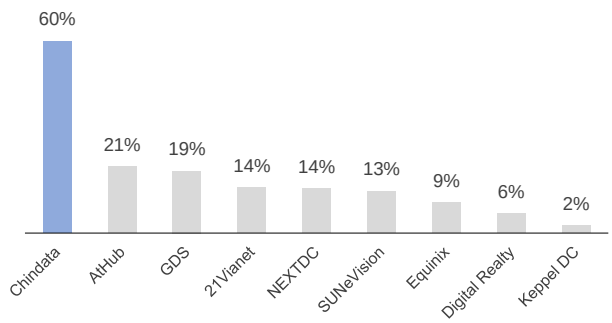
Founded in 2015, Chindata Group has quickly established itself as a major data center player in APAC emerging markets both in terms of revenue …

Revenue comparison, RMB bn



Source: Company data, estimates for Sinnet 2022 figures

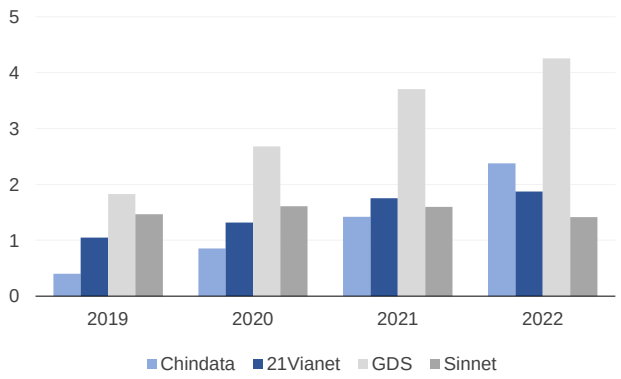
2022 revenue growth comparison, %



Source: Company data, estimates for Sinnet 2022 figures

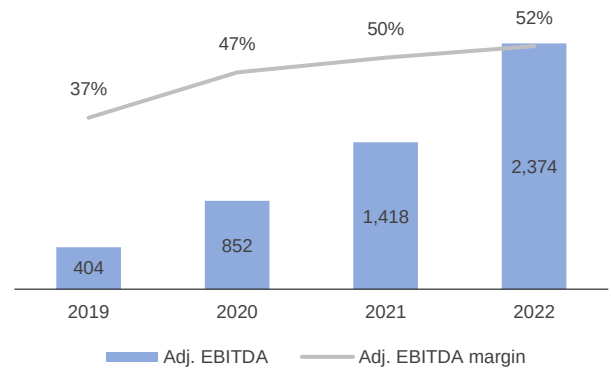
… and profit, becoming the second largest player in terms of adjusted EBITDA among public career-neutral data center providers in China.

Adjusted EBITDA comparison, RMB bn



Source: Company data, estimates for Sinnet 2022 figures

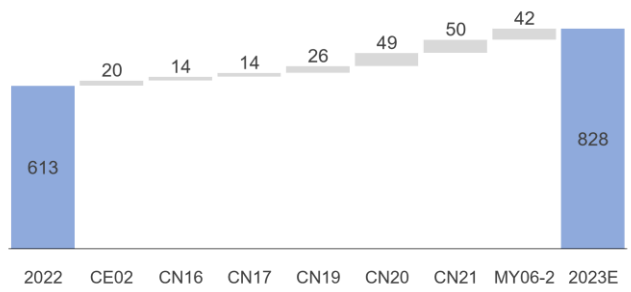
Adjusted EBITDA evolution, RMB mn



Source: Company data

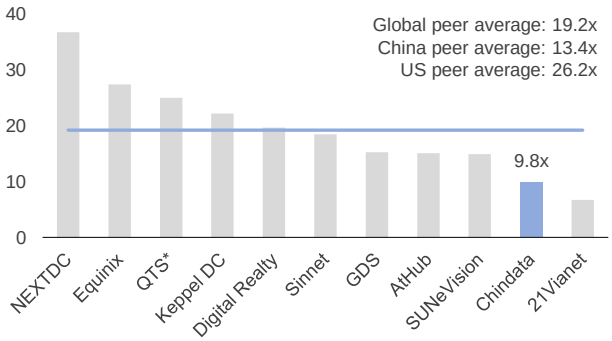
An additional 35% of capacity will be commissioned during 2023, indicating continuing growth exceeding the rest of the market. Yet Chindata is trading at 9.8x EV/EBITDA'22, well below the US and China peer averages.

Chindata 2023 expansion plan by facility, MW



Source: Company data

EV/EBITDA'22



Note: Estimated multiple on 2021 Blackstone's $10 billion acquisition of QTS
Source: Yahoo! Finance, Company data

Business overview

What is now Chindata Group was formed from the merger of Chindata (Xiamen) Science and Technology, a data center business founded by Chinese entrepreneur Mr. Jing Ju in 2015, and Bridge Data Centers, a data center company targeting India and Southeast Asia founded by Bain Capital in 2017. Bain Capital acquired Chindata (Xiamen) in 2019 and merged Chindata (Xiamen) with Bridge Data Centers the same year, with the final entity renamed Chindata Group Holdings in 2020.

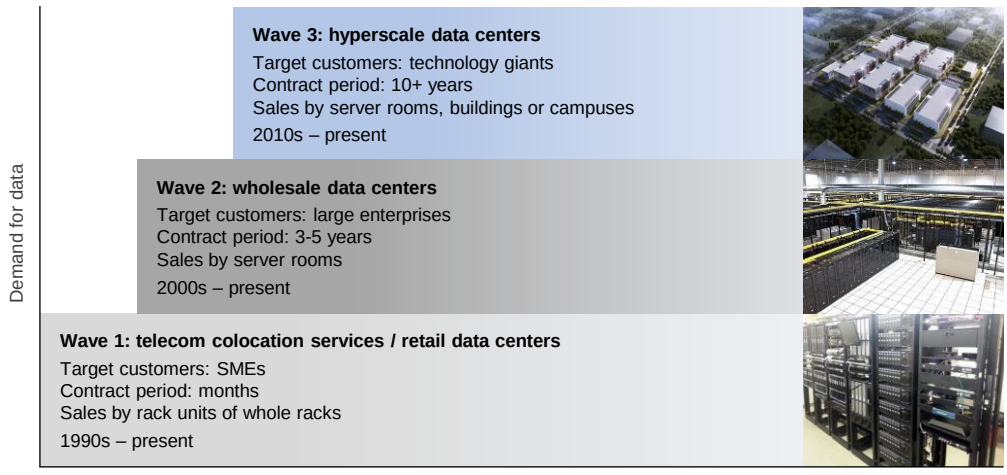
The company currently operates 32 data centers (physical facilities which house the IT infrastructure to run all the cloud and internet services) spread across China, Malaysia and India. While the data center industry has its roots in the 1980s, the recent shift of everything becoming online and the rise of global internet giants (Amazon, Google, Facebook, Microsoft, Apple, Alibaba, ByteDance and others, referred to as hyperscalers) have created an unprecedented wave of demand for large-scale infrastructure. Hyperscalers commonly rely on third-party data center operators to expand their presence in different regions, forming the hyperscale data center market. This section examines this market and Chindata's position to provide potential investors with some insights into Chindata's growth durability.

(1) Unprecedented wave of demand for modern large-scale IT capacity formed a $200 bn hyperscale infrastructure market. Chindata solidified its position as a hyperscale data center technology leader in APAC and proved its ability to deliver infrastructure solutions suited for modern applications.

As the term "hyperscale" suggests, scale is what distinguishes these next-generation facilities – the massive amounts of space and power are required to support thousands of servers for cloud computing, big data analytics and storage tasks. Hyperscale facilities are also more technologically advanced than traditional wholesale or retail data centers as they meet the internet giants' strict technical, operational and pricing requirements for cooling, redundancy, latency, customization, delivery times and operating efficiency.

The rise of the internet giants has marked a new era in the data center industry, raising the bar for data center requirements. Net new demand has largely shifted towards custom build large-scale high-performance facilities that meet the criteria for powering the next generation of cloud, AI, e-commerce, financial, social and healthcare applications.

Growth in demand for data driven by various technology waves



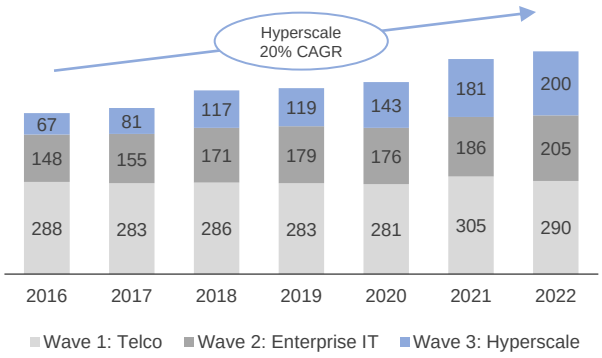
Source: Company data, own analysis

Synergy Research estimates that global hyperscale spending on IT infrastructure reached $200 bn in 2022, making it the fastest-growing segment that now accounts for

29% of total spending on IT infrastructure. The hyperscale market is also unique in that it does not replace the business of incumbent operators but complements it. With steady demand for Wave 1 and Wave 2 capacity, telecoms and wholesale data center operators may lack the incentives and flexibility to fully focus on the new market that requires changes to the business model, creating an opportunity for younger companies.

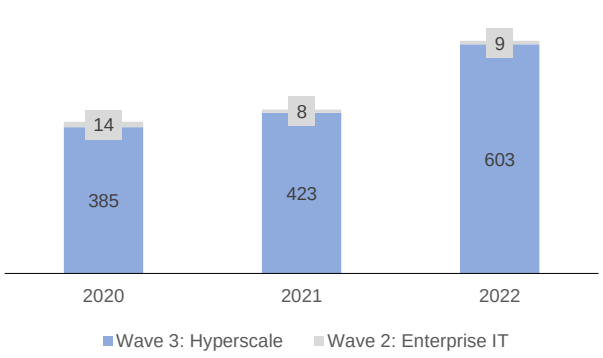
Chindata is rapidly expanding in the most attractive segment of global IT infrastructure market.

Global infrastructure spending, $ bn



Source: Synergy Research Group

Chindata's contracted IT capacity, MW



Source: Company data

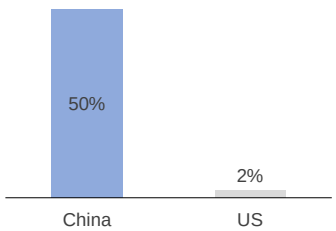
Aside from engineering innovation, the degree of customization internet giants need often requires new approaches to logistics, sales, and government relations. Unlike most of its peers, Chindata has been focusing on hyperscale facilities since its inception. It started in 2015 as a major data center partner for ByteDance and has been steadily accumulating expertise ever since. With 32 data centers, over 400 clients (including deals with Microsoft in 2019 and Tencent in 2021), and sizeable revenue, I believe Chindata has solidified its position as a technology market leader and proven its ability to deliver IT infrastructure suited for modern demand.

(2) Chinese internet giants are increasing their cloud investments faster than other hyperscalers, driving demand for data center services. At least two of China's hyperscalers are Chindata's clients, providing fast-ramping revenue opportunities.

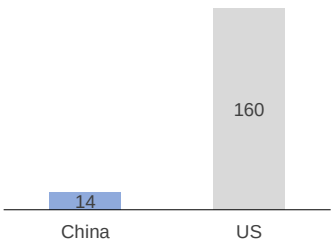
The consensus estimates project China's hyperscalers to increase their cloud capex 50% YoY in 2023 vs 2% for the US peers. Cloud capex naturally creates demand for data center capacity to host and power the equipment and translates well to the company's top line: in 22Q4 alone, Chindata reported 100MW of new contracted & indication of interest (IOI) capacity, 92MW of which is attributed to their anchor client – ByteDance. To put that into perspective, 100MW of capacity corresponds to ~$150 mn of annualized revenue, which is 23% of the company's revenue in 2022.

In 2023, China's hyperscalers are expected to increase their cloud investments at a staggering 50% rate. The absolute amount, however, is still lagging behind that of US peers.

2023E hyperscale cloud capex YoY growth



2023E hyperscale cloud capex, $ bn



Source: BofA research

I believe that the acceleration of cloud investments by China's giants will be sustained for longer. First, the ongoing development of China's digital economy naturally utilizes additional IT resources. Chinese digital sector is still small compared to other major economies, suggesting a growth potential as China would gradually bridge the gap going forward. Second, backed by recent advances in e-commerce, payments, and cloud computing, Chinese hyperscalers are beginning to have a global reach, requiring additional IT infrastructure. Chindata is well positioned to capitalize on that international expansion by providing Chinese hyperscalers with both domestic and overseas capacity.

While Chindata's success has heavily relied on relationships with Chinese hyperscalers, the company is also working to diversify its client base and geography. The management emphasized that they are in the process of landing more capacity with international customers, and I think that strong expertise and a favorable cost position would help the company penetrate into a broader customer base in APAC emerging markets, which are also characterized by a large population, rising internet penetration and rapidly developing domestic technology companies. Again, I think the deals with Microsoft and Google in Southeast Asia validate the diversification effort.

(3) The company's deep presence in strategic locations increases confidence in its ability to meet increasing demand.

90% of the installed and 70% of the under-construction Chindata's capacity is in China, a country with a particularly interesting supply situation. Ideally, the optimal choice for a data center location would be an urban district within a major economic hub to minimize the physical distance to internet users. However, the scarcity of land and electricity in China's tier-1 cities (Beijing, Shanghai, Guangzhou, Shenzhen) makes it difficult to predictably deploy large-scale facilities that are notoriously power-hungry. Instead, Chindata secured construction rights in resource-rich outskirts of major cities that have all three main prerequisites: (1) power, (2) connectivity, and (3) business demand. This is highly consistent with the government's "Eastern Data, Western Computing" project, which aimed to improve the country's imbalance in the layout of digital infrastructure by sending data gathered from the more prosperous eastern regions of China to the less developed but resource-rich western regions for storage and computation. This strategy inspires confidence in the company's ability to build out new hyperscale capacity going forward and suggest additional tailwinds from an improved competitive position, as Chindata's urban-focused peers would have to adjust their business model.

Chindata is highly strategic about its asset locations, bringing together renewable energy, connectivity and business demand.

Chindata's facilities location

Greater Beijing Area (Zhangjiakou & Shanxi)

84% of installed and 60% of under-construction capacity

❶ Zhangjiakou is only an hour's drive from Beijing, and it has an abundant supply of cost-effective land and power. Located on the latitude of 40ºN, Zhangjiakou has the optimal climate conditions to operate data centers. Part of the Eastern Data hub of the project.

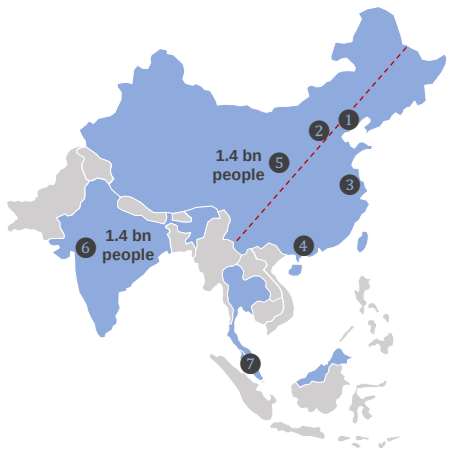
❷ Shanxi is characterized by its low energy costs within the Pan-Beijing area. With cost advantages and low latency, has the potential to become an important hub of the "Eastern Data, Western Computing" project

Yangtze River Delta & Greater Bay Area

4% of installed and 7% of under-construction capacity

❸ YRD region is an important part of China's digital economy. As an international financial center, Shanghai has a huge demand for information technology.

❹ GBA is another technological innovation center. The region has the potential to become a major connecting hub between mainland China and Southeast Asia.



Western Computing hub

❺ Qingyang, Gansu. The company secured rights to 300 acres of land and plans to build out 150 MW. Has access to renewable energy.

Overseas

12% of installed and 33% of under-construction capacity

❻ 20MW hyperscale project in Mumbai supports the business of the key international client.

❼ Malaysia (3 facilities in service and 2 more under construction) and Thailand are two markets as alternatives to Singapore. Singapore is the regional tech hub today, but supply constraints will lead to strong growth in other SEA markets. Chindata has secured abundant resources in these markets.

-- Hu Line illustrates a divide in China's population as well as energy distribution. As of 2015, 94% of China's population lives east of the line. The area to the north/west of the line is the power resource-rich area, also where the key Chindata data centers are located.

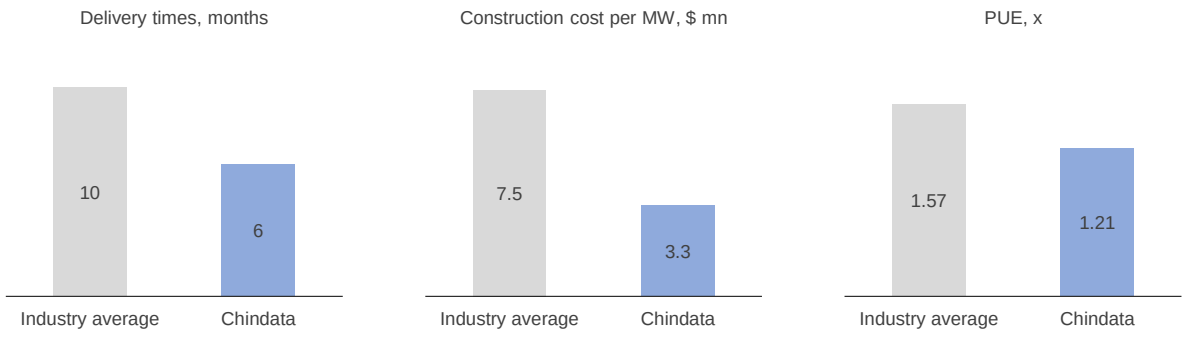
Source: Company data

Similarly, Chindata has secured abundant resources in Malaysia and Thailand, Singapore's two neighboring countries. As a regional technology hub, Singapore has a strong demand for IT capacity: between 2015 and 2020, an average of 150 MW of space was built each year. However, due to the low availability of renewable electricity, the government discusses imposing quotas to allow only 60 MW of new capacity per year, in tranches of between 10 MW and 30 MW. That capacity will not be enough for big players like Microsoft, Tencent, and ByteDance and Chindata expects demand spillover to other SEA countries with adequate resources, low cost and low latency. While the project in Thailand is in its early stages, Chindata's Malaysian business is developing at a firm pace: 95% of the installed 55 MW capacity in Malaysia is already either contracted or has an indication of interest status, and an additional 85 MW capacity is under construction.

(4) While Chindata clearly benefits from the latest technology developments, I believe the durability of its business to be superior to that of many other tech companies, providing investors with a favorable risk-to-reward ratio.

As Chindata progresses towards 1GW of installed capacity, they are accumulating engineering expertise that improves the product. Some examples of practical benefits of their proprietary know-how are (1) advanced airflow design and proprietary high-performance cooling modules that reduce energy consumption, (2) the highly customizable, flexible and scalable modular design of cabinets and fiber pipeline that accelerates delivery and reduces capex, (3) the proprietary electrical architecture further contributing to power savings. According to the management, with the developed capabilities, Chindata's data center solutions feature 50% lower construction cost, more than 20% higher energy efficiency and 30% shorter delivery times than industry averages. This helps attract new clients, providing foundation for further innovation cycle. As the company continues to invest in R&D (423 patents and applications in 2022 vs 216 in 2020), I believe this flywheel to remain a key element of the company's competitive edge and to drive Chindata's business going forward.

Chindata solutions outperform industry averages in terms of return profile and delivery times.



Note: PUE describes how efficiently a computer data center uses energy (lower is better)
Source: Company data

Another element contributing to the durability of Chindata's business is backed by long-term lease contracts with technology companies that have strong market positions: more than 90% of current contracts are with terms of 10 years or more and less than 7% of currently contracted capacity is to expire by 2027. Given the strategic location of Chindata's data centers, the mission-critical services it provides, and the strict compensation clauses of early termination applied to all hyperscale projects signed to date, it is hard to imagine its clients easily switching to a competitor.

Speaking about Chindata's competitors, there are different sets in China and overseas. Domestically, the largest players in the data center market are state-owned enterprises (China Telecom, China Unicom, China Mobile). The telecoms, however, are focused on connectivity, internet access, cloud, and mobile services and do not have the same degree of flexibility to meet the strict requirement of internet giants and therefore can hardly be considered Chindata's direct competitors.

Smaller career-neutral data center providers in China are closer to what Chindata does. However, these companies develop data center facilities mainly within tier-1 cities. The largest player, GDS, has around 70% of its footprint in China located in the Yangtze River Delta and the Greater Bay Area, regions where only 2% of Chindata's domestic capacity is, suggesting a limited overlap in terms of competition. Even if GDS moves towards Chindata's hyperscale business model, it would take time to adjust and get the advantage of Chindata.

Internationally, Chindata's competitive edge might be less pronounced. The management reported lower capex efficiency on their overseas projects, while the lack of protectionist policies positions the company against a broader set of competitors. On a positive note, the APAC market conditions are not new to Chindata, as these markets are also characterized by uneven distribution of population and energy resources, rising internet penetration and rapidly developing domestic technology companies. I think Chindata's expertise in delivering complex projects and the existing relationships with blue-chip customers are two legit advantages to leverage for further expansion in APAC.

Valuation

I value Chindata using a 3-year DCF model, with the terminal value estimated as an EBITDA multiple. This approach reflects the company's strong revenue growth and improving margins. Given the growing market, Chindata's solid competitive position and unique long-term contract profile, I think I can confidently project EBITDA'25E.

By the end of the forecasted period, Chindata would resemble today's GDS in terms of both revenue growth and EBITDA, ~20% and 4.3 RMB mn respectively. Using the GDS's current multiple of 15.3x EV/EBITDA'22 as an exit multiple in 2025, and 11% cost of capital, I arrive at a fair value estimate of $16.5. A more conservative approach would be to assume no multiple expansion. The terminal value of 10.0x EV/EBITDA'25 brings me to a $9.86 fair value estimate, which suggests a 63% upside.

Under conservative assumptions, Chindata's stock fair value estimate implies a 63% upside.

Financials, RMB mn	2022	2023F	2024F	2025F
Revenue	4,552	5,879	7,409	9,056
EBITDA	2,117	2,793	3,533	4,357
uFCF	(3,195)	(953)	(354)	304
Exit EV/EBITDA multiple				10
Terminal value				43,567
Cost of capital, %				11%
Fair EV estimate				31,603
Net debt				6,205
Fair equity value estimate				25,398
Target price, USD				**9.86**
Market price, USD				6.05
Upside, %				**63%**

Source: Company data, own analysis