March 26, 2020

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GDS Holdings Limited (GDS)

March 26, 2020

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and Tim Murray

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tim@jcapitalresearch.com

+1 860 391 6094

GDS Holdings Limited

<table>
<thead>
<tr>
<th>Share Price in USD</th>
<th>$57.04</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Cap (mln)</td>
<td>$8,673.2</td>
</tr>
<tr>
<td>Average volume (shares)</td>
<td>1,309,819</td>
</tr>
</tbody>
</table>

GDS is a fraud. At least 25% of its revenue is fraudulent. Unlike most Chinese companies, GDS creates the fake revenue by round-tripping its own debt and capex. As GDS’s revenue line grows, so does the amount of debt it needs to raise to support the illusion.

In addition to round-tripping, GDS aggressively recognizes future revenues, a portion of which we believe will never be realized. Faked revenue comes without costs, so the ploy also increases reported EBITDA and reduces optical leverage. Using this and other strategies, GDS has persuaded investors to accept its highly customized metrics and argues that it will be the winner in a take-all market. That is simply not true.

By examining dozens of financial statements submitted to the Chinese government, we’ve identified about ¥1.3 bln in unreported debt. We also question the cash balances. Interest income in 2018 was ¥19.2 mln, for an average 0.9% yield, while fixed-term deposits in China were yielding about 3% in 2018. Meanwhile, the company pays up to 9.7% for loans despite its large reported cash balances. Fixed-term deposits in China were yielding about 3% in 2018. No wonder GDS is “actively” seeking new sources of debt to get through the year.

After about a year of research, more than 90 interviews, and visits to all but nine of the 70 data centers that GDS has reported in service or under construction, we have concluded that GDS is a sophisticated Ponzi. With financial markets repricing risk in the last few weeks, we believe the debt pyramid could collapse in 2020.
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Debt Trap

GDS operates carrier-neutral data centers in China. The company reports optically impressive revenue growth and endless capex.

Perhaps enamored with the polished CFO and the impressive guided tours, investors seem to have overlooked that GDS on average spends double what its competitors do on their data centers yet generates only one-third as much revenue per rack in service. The strategy is baffling considering that the existing data centers have 31% reported unutilized capacity. Our report exposes that these outlier results are symptomatic of an attempt to conceal systematic fraud. Government records show massive discrepancies between GDS reports and underlying reality. We look in detail at six of GDS’s acquisitions and describe three examples of fraud involving the same group of individuals, who appear to establish companies expressly to be acquired by GDS. We detail three more examples of what we believe are fraudulently misdirected loans. In one transaction alone, we estimate that GDS misdirected ¥790 mln of investor funds.

Fabricating revenue
GDS accumulates an ever-larger debt pile by raising new loans to pay off old loans and redirecting the additional proceeds into creating “revenue,” which helps generate “growth.” GDS is able to raise so much money be-

Table 1. Data Center Capex

<table>
<thead>
<tr>
<th>Data Center Capex</th>
<th>PPE 2018 net of construction in progress (mln RMB)</th>
<th>Racks in service</th>
<th>PPE per rack in service (in RMB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Peng Telecom &amp; Media Group Co. Ltd. (600804 SH)</td>
<td>¥1,012</td>
<td>30,000</td>
<td>¥33,731</td>
</tr>
<tr>
<td>Shanghai AtHub Co., Ltd. (603881)</td>
<td>¥1,510</td>
<td>28,200</td>
<td>¥53,538</td>
</tr>
<tr>
<td>21Vianet (VNET NASDAQ)</td>
<td>¥4,031</td>
<td>30,654</td>
<td>¥131,508</td>
</tr>
<tr>
<td>Beijing Sinnet Technology Co. Ltd (300383 SZ)</td>
<td>¥4,040</td>
<td>30,000</td>
<td>¥134,669</td>
</tr>
<tr>
<td><strong>Three competitors’ average</strong></td>
<td><strong>¥73,979</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDS</td>
<td>¥11,363</td>
<td>64,000</td>
<td>¥177,544</td>
</tr>
<tr>
<td><strong>GDS premium to average</strong></td>
<td></td>
<td></td>
<td><strong>240%</strong></td>
</tr>
</tbody>
</table>

Shanghai AtHub numbers are for 2019. Source: Company annual reports, Guosen Securities
cause it claims capital costs that are almost twice as high as those of its competitors. We demonstrate that GDS does not actually spend all of this elevated capex but instead brings some of the capex back as “revenue.”

GDS does not disclose the number of racks it operates, nor does it give any of the other metrics that are standard for the industry, like megawatts of utilized capacity. For these tables, we rely on the single sell-side report that mentions GDS’s rack count, by Guosen Securities.

```
光环新网 300383 买入
合理估值： 14.3-19.8 元 咨询股： 15.74 元（维持评级）
2019年05月22日
```

By the end of 2018, GDS had the most racks in operation, already exceeding 64,000.”

The GDS BJ7 data center. | Photo by J Capital July 2019
There is a yawning gulf between GDS’s financial reports to the Chinese government and to U.S. investors. The difference, we believe, is due to round-tripping debt as revenue. We arrive at our estimate that 25% of revenue is faked by looking at Chinese financial statements for GDS’s 15 Variable Interest Entities (VIE), which collect 97% of company revenue. These accounts show a gap between construction spending and PPE, indicating that GDS is spending heavily on construction contracts but not booking new plant and equipment as a consequence. The money just disappears. Using conservative consolidation principles, we found that the gap between construction paid for in 2017 and assets booked in 2018 was ¥659.9 mln, or 24% of 2018 gross revenue.

Here is how the round-tripping works:
To round-trip, you overstate your spending on construction. It’s easy enough to get counterparts to give you receipts that claim you spent ¥43.9 mln when you really spent ¥10 mln, and then you have ¥33.9 million you can direct back to the company as “revenue.” GDS books big construction contracts using an accounting entry that appears only in the Chinese financial statements. It’s called “long-term pre-paid expenses,” ostensibly for fit-out of data centers.

In at least one documented case, we show that 75% of the contract value was round-tripped into GDS as a service contract, creating ¥33 mln in revenue. The GZ1 data center provides us with an example where GDS paid ¥43.9 mln to a construction company called NGH, allegedly for construction services. We found that ¥33 mln of the consideration was probably used to pay for GDS “services.” The construction company rented racks from GDS.

**Telltale Signs: The Acquisitions**

The acquired companies provide insight into these GDS strategies. In each case, GDS overpays for a dubious asset then it loads up that asset with debt--and fails to use that debt for the stated purpose.

GDS has made most of its acquisitions from the same group of individuals and has been trying to hide that fact. Of eight data centers acquired since May 2016 in seven transactions, at least six were purchased from the same small group of associated people. Three of them are founders of several different companies that each use the name “Weiteng” but have no structural connection.

The Weiteng companies all trace back to a few shareholders: Wu Wenzhi, Liu Wanzhao, and someone we believe is Wu Wenzhi’s brother whose name is Wu Ruizhi. Liu Wanzhao is a frequent collaborator with Wu Wenzhi and is his fellow shareholder in Shenzhen Ruideen Investment. None of the former Weiteng or GDS employees we spoke with had heard of these individuals. We believe they are stand-ins for people who would find it inconvenient to disclose their identities.
GDS reported spending ¥399.7 mln to outfit a data center that supposedly was already operating when acquired.

GZ1: round-tripping through a construction contract

In its first acquisition, documents indicate that GDS overpaid a construction company by ¥34 mln in order to create the same amount in revenue.

GDS acquired Weiteng Construction, which operates GZ1, on May 19, 2016 for ¥129.5 mln. We believe GDS fraudulently reported that the data center was operating when acquired. GZ1 could not have had revenue in H1 2016, because Weiteng did not have a license to operate a data center. In fact, it looks like Weiteng Construction was established especially to be acquired by GDS. GDS had lent Weiteng ¥42 mln just a few months before acquisition to make it operational, then GDS reported spending ¥399.7 mln to outfit a data center that supposedly was already operating when acquired.

GDS paid a listed company, called Shenzhen Ning Guan Hong Science Limited (33020 SZ), or NGH, to build out GZ1. NGH used part of the construction money to rent racks from GDS in GZ1. The transactions are clearly documented in NGH’s public reports.¹

¹ A valuation of Weiteng Construction and the 2016 and 2017 annual reports of Ning Guan Hong, in Chinese, can be downloaded here: https://jcapi1research.box.com/s/gvkyjjae861w5jme8algn8yzaalv4
GDS HOLDINGS LIMITED

March 26, 2020

- **GDS pays NGH for construction**: In 2016, GDS paid NGH ¥43.9 mln to build out the data center.

- **GDS “loses” the same amount in PPE that it gains in revenue**: In 2016, when it contracted with NGH, Weiteng had ¥80.6 mln in PPE. The next year, those “fixed assets” dropped to ¥47 mln, a decline of ¥33.6 mln. Magically, that same amount—¥34 mln—was the revenue that GDS claimed for GZ1 in 2016.

- **Feedback loop?** It looks like GDS overpaid NGH by ¥33 mln then NGH paid the money back to GDS, which booked it as revenue.

- **Service company becomes a customer**: In 2017, NGH rented a portion of the GZ1 data center and leased out the racks to clients, NGH reported. ²

**Chart 2. NGH reports paying GDS for services**

<table>
<thead>
<tr>
<th>Project</th>
<th>Amount in period</th>
<th>Amount in previous period</th>
<th>Unit: ¥</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main business income</td>
<td>98,197,387.46</td>
<td>108,209,808.43</td>
<td>-9.25%</td>
</tr>
<tr>
<td>Other business income Other Revenue</td>
<td>479,935.57</td>
<td>194,893.83</td>
<td>147.00%</td>
</tr>
<tr>
<td>Main business income</td>
<td>59,675,524.35</td>
<td>79,525,035.73</td>
<td>-24.96%</td>
</tr>
<tr>
<td>Other business income Other Revenue</td>
<td>896,756.31</td>
<td>0.00</td>
<td></td>
</tr>
</tbody>
</table>

For revenue change: Other revenue increase of 147% in the reporting period is due the price differential from NGH renting data center rack space from Weiteng Construction and sub leasing to clients.

Source: NGH Annual Report 2017

² NGH 2017 Annual Report page 11
**GZ2: Overstating assets**

GDS acquired the next company, called Weiteng Network Technology, from NGH. A valuation report by NGH shows that GDS overstated the value of the company by ¥134.4 mln. This is a clear example of fraud by GDS.

GDS bought Weiteng Network, operating GZ2, for ¥234 mln. GDS said the company had ¥320 mln in assets (not counting intangibles). By contrast, NGH reported Weiteng Network property and equipment of ¥157 mln at the time it divested Weiteng in October 2017. The apparent overstatement amounts to ¥163 mln. Because of differences in capital lease accounting, we estimate that the overstatement is ¥134.4 mln.

**Table 2. Weiteng Network Property and Equipment: GDS vs NGH Accounting (RMB mln)**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Property and Equipment</strong></td>
<td>¥ 157.00</td>
<td>¥ 214.00</td>
<td></td>
<td>¥ 57.00</td>
</tr>
<tr>
<td><strong>Capital lease</strong>4</td>
<td>¥ 106.00</td>
<td>¥ 74.00</td>
<td></td>
<td>¥ 32.00</td>
</tr>
<tr>
<td>**Intangibles (customer relationships)**5</td>
<td>¥ 98.50</td>
<td>¥ 53.10</td>
<td></td>
<td>¥ 45.40</td>
</tr>
<tr>
<td><strong>Total overstatement</strong></td>
<td></td>
<td></td>
<td></td>
<td>¥ 134.40</td>
</tr>
</tbody>
</table>

Source: GDS 20F, NGH Valuation of Weiteng, NGH 2017 Annual Report

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3 Readers can find the report, in Chinese, here: [https://jcapitalresearch.box.com/s/gvkylijae861w5jdme8algn8yzaalv4](https://jcapitalresearch.box.com/s/gvkylijae861w5jdme8algn8yzaalv4)

4 We estimate the capital lease should be valued at ¥74 million, not the ¥106 mln claimed by GDS. The Weiteng Network lease on the property expires on July 14, 2034. Rent in 2018 was ¥3.1 mln and has a 5% annual price increase. On that basis, we arrive at a capital lease value of ¥74 mln. That means the total property and equipment overstatement is ¥89 mln.

5 GDS claimed an intangible asset of ¥98.5 mln for customer relationships. We know from the NGH annual report that GZ2 had only one customer, China Mobile, in a contractual relationship for a further 11.8 years. In many interviews about the terms of GDS contracts, we have not heard one that includes increases in monthly rental fees. As Weiteng Network was making only ¥4.5 mln in profit at full utilization, according to its financial statements, that would make the value of the contract over the 11.8 years ¥53.1 mln, and considerably less if discounted for the time value of money.
The key mechanism for round tripping debt into revenue is overstated capex. Recording data center leasehold improvements (called “long-term deferred expenses” in Chinese accounting) is how these expenses get inflated.

The GZ2 transaction demonstrates how leasehold improvements are used as a piggy bank. NGH very clearly itemized leasehold improvements down to the floor level, and those improvements summed to ¥76.7 mln. By contrast, GDS recorded ¥155.1 mln for leasehold improvements when it acquired GZ2—a straight-up lie.

<table>
<thead>
<tr>
<th>Project</th>
<th>Appraised Value (Unit: ¥10,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
</tr>
<tr>
<td>流动资产</td>
<td>1</td>
</tr>
<tr>
<td>非流动资产</td>
<td>2</td>
</tr>
<tr>
<td>其中：固定资产</td>
<td>3</td>
</tr>
<tr>
<td>无形资产</td>
<td>4</td>
</tr>
<tr>
<td>长期待摊费用</td>
<td>5</td>
</tr>
<tr>
<td>长期负债</td>
<td>6</td>
</tr>
<tr>
<td>流动负债</td>
<td>9</td>
</tr>
<tr>
<td>非流动负债</td>
<td>10</td>
</tr>
<tr>
<td>负债合计</td>
<td>11</td>
</tr>
<tr>
<td>净资产</td>
<td>12</td>
</tr>
</tbody>
</table>
**GZ3: ¥790 mln that wasn’t there**

We estimate that GDS overstated the asset value of the next acquisition, of GZ3, by ¥434 mln then took out a loan of ¥356 mln for construction. The loan money went to a subsidiary that does not hold the lease for the data center. Between the overstatement and the misdirected loan, the company’s misstatements on GZ3 equal ¥790 mln.

GDS reported that the GZ3 data center had property and equipment of ¥489 mln, net of capital leases, when acquired on May 2, 2018. We obtained the financial reports for the license holder and the WFOE company that together hold the assets for this data center, and they had only ¥55 mln in assets at the time of the GDS acquisition.⁶

<table>
<thead>
<tr>
<th>Table 3. GZ3 Data Center Assets (mln RMB)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Property and Equipment</strong></td>
</tr>
<tr>
<td>GDS May 2, 2018 (as reported by GDS)</td>
</tr>
<tr>
<td>¥489</td>
</tr>
</tbody>
</table>

Source: 2018 GDS 20F page F-40, China Finance Bureau filings. GDS data excludes capital lease assets.

A month after the acquisition, on June 12, 2018, the company that GDS calls the “asset company” for the GZ3 data center, Qian Hai Wan Cheng, took out a loan of ¥356 mln from the United Overseas Bank Guangzhou Branch. That money was used for “pre-paid expense,” otherwise known as leasehold improvements in Chinese accounting. Adding to the improper nature of this transaction, Qian Hai Wan Chang does not hold the lease for GZ3 and therefore could not carry the expense for leasehold improvement on its balance sheet.

**SZ5: Hiding another Weiteng purchase**

With the next acquisition, of SZ5, GDS again overpaid for assets and again took out a big loan that disappeared.

In March 2017, GDS acquired SZ5 for ¥312 mln despite disclosing that the net book value was just ¥13 mln (excluding acquired customer relationship

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⁶ The WFOE company that GDS said had the data company assets is called Qian Hai Wan Chang. That company had ¥424 mln in assets at the end of 2018. But those assets could not have been there at the time of the GDS acquisition, because Qian Hai Wan Chang became active only on May 17, 2018, after the acquisition. The registered capital, ¥157 mln, was put into Qian Hai Wan Chang only on May 17, 2018.
intangibles and related deferred tax and goodwill). SZ5 was still under construction and had no license to operate a data center.

### Table 4. SZ5 Acquisition (mln RMB)

<table>
<thead>
<tr>
<th>2017 Shenzhen 5 Acquisition (SZ5)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Book Value Excluding Intangibles, Deferred Tax</td>
<td>¥13.2</td>
</tr>
<tr>
<td>Acquisition Price Paid for Equity Control</td>
<td>¥300.5</td>
</tr>
<tr>
<td>Acquisition Price Paid % Net Book Value Excluding Intangibles, Deferred Tax</td>
<td>2269%</td>
</tr>
</tbody>
</table>

Source: GDS reports

The WFOE “asset” company for this data center is Guangzhou Shi Wan Guo Yun Lan Data Technology Co., Ltd. In 2018, that company spent ¥702 mln on construction.

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7 See company presentation August 14, 2018 page 23
That is far more than construction could have cost. Former GDS executives we interviewed who were in charge of data center construction estimated that GDS would have had to spend about ¥300 mln on the construction of phases 1 and 2 ground-up. They estimate the overstatement at ¥400 mln.

The SZ5 data center is 10,000 sqm. An environmental assessment report on the construction of the GDS data center GZ1 at 31 Kefeng Lu in Guangzhou reported total investment there at ¥235 mln for a construction area of 15,437 sqm, yielding ¥15,131 per sqm. The SZ5 construction payments of ¥702 mln for 10,000 sqm yield a cost per square meter of ¥70,200.

Another way to look at it is cost per rack in service. We interviewed third parties working in the data center, who confirmed that SZ5 has 3,000 racks in service. The ¥702 mln in fit-out costs alone come to ¥234,000 per rack. The most expensive data center built by Shanghai AtHub, the Shenzhen Baolong data center, required total investment of ¥142,778 per rack, according to disclosures, including the price of servers—which we know from interviews GDS does not buy.

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8 Download the Chinese-language report here: https://jcapitalresearch.box.com/s/1rc9e74eebmvs5k4qu69jjegd6a2ht2r
Still buying from Weiteng: BJ9 and GZ6

The spending is getting higher and higher. GDS acquired the BJ9 and GZ6 data centers in H2 2019 for ¥1.2 bln. We discovered that the seller, again, is the Weiteng group.

Although GDS has not disclosed its name, management said that the same seller is behind both deals.9 The immediate seller is a data center operator called Kunpeng Data Centers (http://www.hjkpdata.com), but government documents show that Kunpeng acquired the holding company for the data centers from Shenzhen City Tianzhu Investment, a vehicle of Weiteng brothers Wu Wenzhi and Wu Ruizhi.

The operating10 company for GZ6 is in the same development zone as Weiteng Construction, Weiteng Network, and Yun Lan, the Weiteng-affiliated holding company for SZ5.

9  “Guangzhou 6 and Beijing 9 are being acquired from the same seller, it’s a second-tier data center operator which had a portfolio with more than 10 data centers.” CFO Dan Newman, Q2 2019 earnings call

10  Government records show that Guangzhou Yinwu Data Technology Co. Ltd. was owned as of February 2016 by Shenzhen Tianzhu Investment, which was established by Weiteng Construction.
Ever since a report in July 2018 by Blue Orca Capital accusing GDS of fraudulent transactions with Weiteng, we expect that GDS is sensitive about disclosing new transactions with this group.
**SH11: Cai Tuo**

In the SH11 transaction, GDS spent ¥320 mln to acquire Cai Tuo, a steel-trading company that was not operating in 2017, six months before the acquisition. They bought this company even though GDS has 10 data centers just down the road and could easily have built more. We know this from, among other things, construction of the SH12 and SH13 data centers on sites leased from existing landlords.

Shortly after the purchase, GDS took out a loan of ¥191.8 mln, then it paid ¥168 mln in fit-out costs.

**December 2019: Lanting (BJ10, BJ11, and BJ12)**

We suspect that GDS overpaid for its newest acquisition, Lanting in Beijing. We obtained statutory accounts for the companies being acquired in the transaction and found that, even at high utilization, Lanting in 2018 reported only ¥61.6 mln in revenue and lost ¥45 mln.

Based on our interviews, we believe that the second of three data centers owned by Lanting was completed last October. If that completion led revenue to double in 2019, then GDS would have paid about 20x revenue for Lanting.

GDS is paying $348.4 mln, equal to the total enterprise value, plus assumed accounts receivable and less assumed liabilities at closing, for three Lanting data centers in Beijing, one of which has not yet been built. According to our interviews, the first site in Beijing started construction at the end of 2017, and now two of the three data centers are complete, with 2,000 racks in each. Tencent is the key tenant of phase 1 and Kuaishou, an online streaming company, has reportedly booked phase 3.

GDS is acquiring two of the Lanting companies in the transaction but has left behind another Lanting company that is owned by the same shareholders. We suspect that this company, called Lanting Yunjing, may be used in the future to create “revenue” for Lanting. Lanting Yunjing offers technology development and services.

**Unreported Debt**

GDS accounts are littered with anomalies, none as great as those between Chinese and U.S. GAAP accounts.
Based on Chinese accounts for the 15 VIE companies after consolidation, we estimate the company has ¥1.3 bln in unreported debt.

Our comparison of the Chinese and U.S. GAAP accounts showed other important discrepancies:

- Including restricted cash, the VIE cash balances are short by ¥117 mln
- The VIE companies have ¥437 mln more short-term borrowings than reported in the U.S.
- Accounts payable are ¥433 mln higher than reported
- Long-term borrowings are higher by ¥1.3 bln.

### Table 6. Discrepancies Between GDS US and Chinese VIE Accounts (in mln RMB)

<table>
<thead>
<tr>
<th>ASSETS</th>
<th>VIE accounts reported in China</th>
<th>VIE accounts as reported in the U.S.</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>¥ 435</td>
<td>¥ 552</td>
<td>¥ -117</td>
</tr>
<tr>
<td>Property and equipment, net</td>
<td>¥ 789</td>
<td>¥3,058</td>
<td>¥ -2,269</td>
</tr>
<tr>
<td>Short-term borrowings and current portion of long-term borrowings</td>
<td>¥673</td>
<td>¥ 235</td>
<td>¥ 438</td>
</tr>
<tr>
<td>Long-term borrowings</td>
<td>¥ 1,329</td>
<td>¥60</td>
<td>¥1,269</td>
</tr>
<tr>
<td>Total liabilities</td>
<td>¥ 3,803</td>
<td>¥ 1,957</td>
<td>¥1,846</td>
</tr>
</tbody>
</table>

Source: Chinese Finance Bureau, company reports, J Capital Research. GAAP VIE accounts come from notes in the financial statements in the 20F, and only comparable categories are presented. Some of the discrepancy in PPE is due to differences in capital lease accounting under U.S. GAAP and PRC standards. J Capital consolidation is based on GDS disclosures but is subject to interpretation. U.S. reported cash includes restricted cash.

### Missing cash?

GDS reported an average cash balance of ¥3.96 bln in the first nine months of 2019, and yet the company pays up to 9.7% for loans from Chinese shadow banks and an average over 7%. High cash balances while borrowing ultimately were a problem in a number of Chinese frauds, including Long-
top and China Media Express, now both delisted.

In the Q2 2018 conference call, responding to Blue Orca, management said the cash was kept offshore due to foreign exchange controls until it could be used for capex spend on the Mainland. This turned out to be untrue, since GDS after that time has spent heavily on capex but borrowed locally rather than fully utilizing offshore cash. We suspect that the cash may be secured against undisclosed debt and cannot be spent.

Like Lucy holding the football, GDS takes big loans then whisks them away. A few examples:

- In Chengdu, GDS reported that the data center had ¥925 mln in debt at the end of 2018—but the borrower of record, EDC Chengdu, had just ¥161 mln in debt on its books at the end of 2018. The other ¥763 mln somehow disappeared.

- In SH1, GDS reported that Shanghai Waigaoqiao, which operates the data center, took ¥1.47 bln in loans in 2016, but the debt did not appear on reports the company originally filed with the tax office. GDS later filed a revised report showing ¥553 mln in debt. GDS said that ¥340 mln in new loans replaced old loans. The remaining ¥577 mln was unaccounted for.

GDS’s pattern of borrowing and spending is accelerating, as Ponzi’s must. The company spent about ¥770 mln on land-use rights in Hong Kong in summer 2018 without separately reporting the transaction, except for a tiny note in the annual accounts. It spent $348.4 mln in December on two data centers in Beijing that we discovered are insolvent, then ¥1.37 bln on a piece of land in Shanghai in January. We believe the accelerating expenditures are simply planting cash with a counterpart in order to create future “revenue” and maintain the fictional growth momentum.

A key consequence of the strategy of taking in debt to generate “revenue” is a mounting interest load. GDS has to borrow to make its interest payments. The company spent ¥915.7 mln in 2019 just to service its ballooning debt—a figure almost as much as the reported gross profit for 2019. This is far higher than what competitors pay. Every other company in the industry has healthy interest cover from net income.
Weaving debt into revenue has enabled GDS to burn through ¥13.7 bln in financing cash flows since 2015. Despite its founding in 2006, at the start of the phenomenal growth of China’s internet, GDS has been slower than any competitor to achieve profit. A key reason: GDS spends twice what its competitors do in capex.

In its 2019 earnings release, GDS again touted its ridiculous “Adjusted Net Operating Income (NOI)” calculation, which says that GDS would be profit-

<table>
<thead>
<tr>
<th></th>
<th>Net interest</th>
<th>Revenue</th>
<th>Net interest/revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDS</td>
<td>¥-916</td>
<td>¥4,122</td>
<td>22%</td>
</tr>
<tr>
<td>Dr. Peng</td>
<td>¥-102</td>
<td>¥4,569</td>
<td>2%</td>
</tr>
<tr>
<td>Sinnet</td>
<td>¥-94</td>
<td>¥6,002</td>
<td>2%</td>
</tr>
<tr>
<td>AtHub</td>
<td>¥-58</td>
<td>¥727</td>
<td>8%</td>
</tr>
<tr>
<td>EQIX</td>
<td>-$452</td>
<td>$5,562</td>
<td>8%</td>
</tr>
<tr>
<td>DLR</td>
<td>-$287</td>
<td>$3,217</td>
<td>9%</td>
</tr>
</tbody>
</table>

* Sinnet information for 2018. Source: Company financial statements via Capital IQ

GDS spent ¥915.7 mln in 2019 just to service debt, 22% of revenue

Source: Capital IQ. Profit as reported in local currency. Dr. Peng values through Q3 2019.
able IF investors didn’t count interest expense, sales expenses, G&A, R&D, depreciation and amortization—basically, all the normal expenses of a company.

Revenue recognition problems
We believe that GDS may be prematurely recognizing revenue in excess of billing. Billing to customers can be variable, whereas GDS’ revenue recognition for its primary activities is predominantly fixed on a straight-line basis over contract terms. Consequently, during customer grace periods, which can take up to two years, recognized revenue can be far in excess of actual billed customer obligations.

There are two types of grace periods for clients, according to our interviews, both within the contract terms. The first is the move-in period, during which GDS is preparing space for clients’ use. This is not charged and may take two to six weeks but may fall within the term of the contract. The second is the grace period during which large clients may pay according to actual use of racks rather than the number of racks committed to under the contract, as long as they fill a certain proportion of the promised space. In year one, this proportion can be as low as 30%, according to former GDS executives.

At least five of our interviews with former GDS staff indicate these long grace periods for the biggest clients to pay and move in. The company also confirms this in its 20F:

“Our contracts provide flexibility to our customers with regard to utilization and the commencement of billing. Anchor customers with large-scale commitments usually move in over 12 to 24 months, whereas enterprise customers usually move in over a period of three to six months.”

We confirmed with a former GDS executive that the total payment committed generally exceeds the amount of cash that GDS collects over the life of the contract.

A former GDS executive told us big clients have no obligation to fill committed space for the first two months of a contract and after that period need to meet only 70% of the commitment. Some large clients like Tencent
and Alibaba, he said, usually get three months free and six months during which they are charged by actual utilization rather than committed space, after which they need to meet just 70% of committed utilization.

GDS recognizes revenue for rows of unused empty racks. The company might as well recognize revenue for rows of tumbleweed blowing through the desert.

If GDS were recognizing variable revenue according to true customer usage, then annual revenue per utilized area in service should fall when new utilized area significantly increases year on year, as was the case in 2018, reflecting new clients with new grace periods coming on. In 2018 and 2017, GDS increased its utilized area in service by 46,735 sqm or 76% and 24,589 sqm or 66% compared to 2017 and 2016 respectively.

Subtracting utility costs from service revenue gives a reasonable proxy for underlying reported rent revenue. From this, we calculate annual rent revenue per simple average area of utilized area in service to be ¥24,884/sqm and ¥24,736/sqm in 2017 and 2018, respectively, basically a flat number even though the company reported that customer rent rates were declining. This apparently steady YoY rent revenue per utilized sqm indicates de minimus variable charging for gradual, grace period rent occupancy.

Based on interviews, we believe billing for newly utilized area in service may be 40% less than booked straight-line revenue in the first year of area-in-service utilization. Using our calculated average rent for utilized area in service, we estimate 2018 revenue was overstated about ¥200 mln, and possibly more. Assuming no matching of costs, pulling forward revenue of ¥200 mln would generate a profit overstatement of the same amount. The 2018 gross income of ¥168 mln would be wiped out.

We can see the discrepancy between straight-line recognition and variable billing in the GDS “unbilled receivables” account. In 2018, out of total accounts receivable of ¥541 mln, some ¥385 mln, or 71%, was un billed. Unbilled receivables were 14% or 1.7 months of total 2018 annual revenue, which was ¥2.8 bln. Billed receivables of ¥156 mln equate to 6% or nearly three weeks’ worth of annual revenue. Although GDS may claim it bills customers in arrears on a monthly or quarterly basis to explain its unbilled receivables, we believe many customers are billed monthly and the un-
billed receivables on its balance sheet are excessive. Comparable companies like 21Vianet (VNET) and Equinix (EQIX) report no unbilled receivables.

We believe some of these unbilled receivables were used for securitizing financing arrangements. From GDS’s own filings, we see that pledged accounts receivable against borrowings far exceeded billed receivables. Assuming every billed receivable is pledged, there must be at least ¥209 mln in pledged unbilled receivables on balance sheet. If unbilled receivables kept on balance sheet can be used for securing finance, it is not unreasonable to believe there may also be unbilled receivables used for financing that could be off balance sheet. It’s not just about flattering revenue and profitability - providers of finance, not just shareholders, may also be asked to value receivables from revenue derived out of thin air.

![Chart 4. Unbilled Receivables as a % of Total (in mln RMB and %)](source: GDS disclosures)
Early revenue recognition scandals have brought about famous collapses of firms like Tesco, whose share price cratered in 2014 after the company allegedly booked supplier sales that were contingent on hitting targets the company knew would not be met. California Micro Devices made up about one-third of its revenue by booking contracts from later quarters and never reversing revenue for returned shipments. Maxwell Technologies was charged by the SEC with inflating revenue with aggressive recognition schemes such as customer side deals with full right of return; channel stuffing; extended payment terms; and falsified purchase orders. The Chinese software firm AsiaInfo was taken private in the wake of early revenue-recognition allegations.

### Faking Utilization
We believe GDS utilization is at least 16% lower than claimed.

The company provides utilization based on “area in service,” a self-determined number based on how many clients GDS is able to bring in. If GDS does not have clients to rent space, it reports a lower “area in service” number.

If GDS were to base utilization on its disclosed building area rather than area in service, utilization would drop from 69% to 52.7%. When area held for future development is included, utilization is less than one-third.

In June 2017, the company began referring to the “IT area” of its data centers. The company has never defined IT area, but it does say that the IT area of certain data centers is entirely committed. That means that IT area must be no larger than area in service. And yet reported utilization based on IT area generally yields utilization levels well below reported utilization.

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The average utilization we can calculate from reported IT area versus area utilized is 57.8%, while GDS reports 71%.

GDS defines “area under construction” as area “not yet ready for service” but we believe that the majority of area under construction refers to the portions of an active data center that have not yet been made available to customers—in other words, if there is no customer, the area is not in service.

<table>
<thead>
<tr>
<th>Data Center</th>
<th>Reported IT area</th>
<th>Reported Area Utilized</th>
<th>Reported Utilization</th>
<th>Calculated Utilization</th>
</tr>
</thead>
<tbody>
<tr>
<td>GZ3</td>
<td>13,000</td>
<td>7,648</td>
<td>95.9%</td>
<td>58.8%</td>
</tr>
<tr>
<td>BJ3</td>
<td>4,260</td>
<td>2,871</td>
<td>91.3%</td>
<td>67.4%</td>
</tr>
<tr>
<td>HB2</td>
<td>5,000</td>
<td>2,958</td>
<td>63.0%</td>
<td>59.2%</td>
</tr>
<tr>
<td>HB3</td>
<td>5,000</td>
<td>2,050</td>
<td>44.0%</td>
<td>41.0%</td>
</tr>
<tr>
<td>SH8</td>
<td>5,000</td>
<td>2,354</td>
<td>48.0%</td>
<td>47.1%</td>
</tr>
<tr>
<td>SH9</td>
<td>3,800</td>
<td>2,790</td>
<td>83.8%</td>
<td>73.4%</td>
</tr>
</tbody>
</table>

Sources: March 13, 2018 announcement, April 18, 2018 announcement, May 10, 2018 announcement for IT area, 20F for utilization

Table 9. IT Area versus Reported Utilization (m2 and %)

<table>
<thead>
<tr>
<th>Location</th>
<th>Area in service</th>
<th>Area Under construction</th>
<th>Area held for development</th>
<th>Total area</th>
<th>Area in service/Total area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shanghai</td>
<td>56,685</td>
<td>29,505</td>
<td>9,185</td>
<td>95,375</td>
<td>59.4%</td>
</tr>
<tr>
<td>Shenzhen</td>
<td>30,154</td>
<td>6,821</td>
<td>7,334</td>
<td>44,309</td>
<td>68.1%</td>
</tr>
<tr>
<td>Guangzhou</td>
<td>22,178</td>
<td>-</td>
<td>14,000</td>
<td>36,178</td>
<td>61.3%</td>
</tr>
<tr>
<td>Beijing</td>
<td>21,418</td>
<td>28,875</td>
<td>19,881</td>
<td>70,174</td>
<td>30.5%</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>953</td>
<td>-</td>
<td>7,061</td>
<td>8,014</td>
<td>11.9%</td>
</tr>
<tr>
<td>Chengdu</td>
<td>14,512</td>
<td>-</td>
<td>21,506</td>
<td>36,018</td>
<td>40.3%</td>
</tr>
<tr>
<td>Hebei Province</td>
<td>14,456</td>
<td>-</td>
<td>-</td>
<td>14,456</td>
<td>100.0%</td>
</tr>
<tr>
<td>(HB,LF, ZB)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>160,356</td>
<td>65,201</td>
<td>78,967</td>
<td>304,524</td>
<td>52.7%</td>
</tr>
</tbody>
</table>

% Total: 52.7%, 21.4%, 25.9%

Source: GDS 2018 20-F

Table 10. Utilization versus Total Area
Adding in MOUs signed for future leases yields an even lower proportion of space utilized.

This inflated utilization is one reason why GDS reports the lowest revenue per rack in the industry—lots of the racks are not actually in service.

Table 11. 2018 Data Center Revenue per Rack (in mln USD)

<table>
<thead>
<tr>
<th>Company</th>
<th>2018 revenue in USD mln</th>
<th>Rack count</th>
<th>Revenue per rack</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sinnet</td>
<td>$870</td>
<td>30,000</td>
<td>$29,014</td>
</tr>
<tr>
<td>EQIX</td>
<td>$5,072</td>
<td>70,000</td>
<td>$18,784</td>
</tr>
<tr>
<td>Dr. Peng</td>
<td>$658</td>
<td>30,000</td>
<td>$21,923</td>
</tr>
<tr>
<td>VNET</td>
<td>$490</td>
<td>30,654</td>
<td>$15,972</td>
</tr>
<tr>
<td>Shanghai @Hub</td>
<td>$131</td>
<td>10,465</td>
<td>$12,562</td>
</tr>
<tr>
<td><strong>GDS</strong></td>
<td><strong>$402</strong></td>
<td><strong>64,000</strong></td>
<td><strong>$6,280</strong></td>
</tr>
</tbody>
</table>

| **Average competitor revenue per rack in service** | **$19,651** |
| **GDS discount to average**                       | **-68%**    |

Source: Company filings. Note that revenue is not completely comparable. VNET, for example, derives 12% of revenues from managed network services.

In several locations, we can pinpoint lies about utilization. In Chengdu, for example, there were six years when the data centers were operating, but GDS did not report on utilization. Satellite photos show that that CD1 Phases 1, 2, and 3 were completed in November 2010, while the company did not report them as completed until Q2 2017. Satellite data show that CD1, reported in service from H1 2011, was vacant until June 2016 despite the GDS report that it was 25% utilized. \(^{13}\)

\(^{13}\) Company presentation December 5, 2016 page 21
GDS Holdings Limited
March 26, 2020

Satellite Image
Nov 15, 2010

GDS Claim
• Construction of CD1 Phase 1 completed Nov 2010

Satellite Image Evidence
• These buildings are CD1 Phase 1, and CD1 Phase 2 and 3
• Photo below is CD1 from website and company presentations

Source: Google Satellite and GDS. Photo shows completed buildings in Phases 1-3.

Satellite Image
April 14, 2017

GDS Claim in Q1 2017:
• CD1 Phase 2 and 3 commence construction
• Capex in Q1 of ¥580 mln was mainly used for CD1 Phase 3

Satellite Image Evidence:
• CD1 Phase 2 and 3 no construction (satellite image from Nov 2010 shows same structures for CD1 Phases 1, 2 and 3)
• Construction on CD2 Phase 1 (Building below) has begun, but company reports it begins in Q3 2017 – at least two months later

Source: Google Satellite and GDS corporate website
At GZ1, GDS rents at least 60% of the data center wholesale to several agents, including The Bigone and New Century, both companies that we interviewed. GDS claims that GZ1 is 99.7% utilized, but we know from interviews that The Bigone and New Generation pay only for what they use and claim utilization of around 70%. It is not possible that GZ1 has an occupancy rate of 99.7%.

What Investors Can Do
We have tried unsuccessfully to obtain the company’s comment on many of these issues. GDS is certain to deny the allegations presented here, and some investors will not know whom to believe. But investors can and should demand answers to these questions:

1. Why does GDS have a different set of subsidiaries for each data center? Why not consolidate all debt in the parent company, at lower borrowing costs?
2. Why is GDS acquiring so many companies from the Weiteng group of owners? What, really, is Weiteng?
3. Does GDS factor receivables off balance sheet?

We have collected far more examples of malfeasance than we have presented here, and J Capital plans further reports on GDS.

Appendix: Blue Orca Was Right
Blue Orca Capital, in a short recommendation published July 31, 2018, reported that Chinese records show a payment of just ¥72 mln for Weiteng Network, not ¥234 mln as claimed. GDS said that the balance of ¥162 mln was paid to Raojin Limited in Hong Kong, because Raojin’s onshore company, Wan Qing Teng Data (Shenzhen) Co., Ltd., had contractual control of Weiteng Network.

That is clearly untrue. Wan Qing Teng was established in October 2016, 18 months after Weiteng Network, and it was not an active company when GDS made its GZ2 acquisition. No capital had been paid into the company, and it had no financial activity.

Weiteng Network was in fact controlled by its 51% owner, NGH, which exerted management control over the company. Neither Wan Qing Teng Data nor Raojin is mentioned in NGH’s reports. There is no contractual relation-
ship, which is typically associated with a controlling entity. Post-acquisition, Weiteng Network was owned directly by GDS via GDS Suzhou. There is no relationship between Weiteng Network and Wan Qing Teng. GDS could and does exercise control over Weiteng Network via GDS Suzhou, yet GDS maintains Wan Qing Teng. We think that is in order to use Wan Qing Teng for round-tripping.

Chart 5. GDS Lied About Offshore Payments

GDS claimed that offshore entities controlled GZ2, GZ3, and SZ5 via WFOE-VIE clusters typical of the structures used for domestic data centers. Yet none was structured as a VIE at the time of acquisition

- None of them were structured as VIEs at the time of acquisition
- Post acquisition, all data centers were under the control of an existing GDS VIE

We believe these faked VIEs were used to:

- Make payments to third parties offshore
- Used as debt vehicles to create revenues for the data centers

Source: GDS presentation Q2 2018
When GDS bought Guangzhou Weiteng Data Technology Ltd., which owned the GZ3 data center, on May 2, 2018, the company made payments to companies that did not control the data center.

GDS claims GZ3 was acquired via a “target group” structured as a VIE. There was a domestic licensee, an offshore holding company called PSDC Ltd., and an onshore WFOE. The ownership of PSDC had been moved to a Caymans shell 15 days before the deal. GDS claimed that the WFOE was a subsidiary of PSDC Ltd. That was untrue. PSDC acquired the onshore entity, Qian Hai Wan Chang, on May 17, 2018, 15 days after the acquisition closed.

PSDC was just a vehicle to hand money to unknown persons controlling a Cayman Islands company.
Chart 6. GZ3 Acquisition Sham to Pay Unknown Parties

*Alpha Tech owned PSDC for 50 days before the acquisition was announced

**PSDC acquires this company 15 days after GDS acquired PSDC

GDS used a sham VIE to make a payment to the unknown parties that controlled Alpha Tech

Source: SAIC, Hong Kong Company Registry, GDS reports
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