GlassHouse Research

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Cubic Corp Burning Through Cash as Insolvency Risk Looms Ahead

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Overall, we search for evidence of a "culture of fraud" within public companies.

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Initiation of Cubic Corporation (CUB) with a Target Price of $17.80 (54% downside)

Cubic Corporation's suspect percentage-of-completion accounting infers that CUB has continued to miss milestones regarding their major projects. This is while management has obfuscated its financials by prematurely recognizing revenue in prior periods. Exacerbating our concerns, COVID-19 will massively amplify these milestone delays in major metropolitan cities with shutdowns.

- Cubic Corp's unbilled receivables have dwarfed its customer advances, surpassing historic levels at the firm. Surging contract assets and declining deferred revenues lead us to believe the company prematurely recognized approximately $108.5 million in TTM sales ($173.9 million in FY2019).

- Contrary to sell-side analysts' initial comments, the COVID-19 Virus and ensuing "shelter-in-place" laws will materially impact CUB's major projects in New York, Boston, San Francisco, and Chicago. We believe this will exacerbate CUB's already weak balance sheet and push milestone delays into massive losses for the firm.

- Both reported and "adjusted" free-cash-flow figures provided by CUB management remain abysmal. If not for the company's sale of its real estate assets ($44.9 million), factoring of its receivables ($31.1 million), and delaying of payments to suppliers ($50.2 million), we calculate that FCF has been cosmetically enhanced by $126.2 million in FY2019; for a true FCF value of –$162.2 million (vs management adjusted figure of +$14.1 million).

- Cubic has needed to restate its financials in 8 of the last 13 fiscal years due to revenue recognition errors. Based on our analysis herein, we suggest that CUB's earnings quality is in an even worse state now. As a result, GHR predicts Cubic may need to restate financials based on the magnitude of these ominous trends.

Cubic's Dubious Past Gives GHR Cause for Concern

Management of Cubic Corporation (CUB) has been recently patting themselves on the back for a job well done reaching their Goal 2020 targets set back in late 2015. However, when our analysts looked under the hood, we found a management that has moved goalposts, changed the way they calculate performance metrics, and obfuscated their original targets to appease investors/analysts.

Since the time when the original Goal 2020 was announced, CUB replaced their Chief Financial Officer, divested their Defense Services segment, ramped up their acquisition activity, and changed performance target metrics from GAAP EPS to Adjusted EBITDA and Adjusted EPS. We believe all of this has played a major factor in reaching their "targets," rather than from organic sources, as we will detail throughout the report.

Our investment thesis revolves around 1) management has prematurely recognized revenue on significant projects, 2) a large portion of awards have come from extremely low margin project wins and 3) the COVID-19 Virus and aftermath will hamper CUB's business drastically over the next year and beyond. Moreover, where the Transportation Systems (CTS), Mission Solutions (CMS), and Defense System (CDS) segments have enjoyed substantial bookings/backlog gains in FY2018, these balances have cratered in FY2019 with no replenishment in sight. While the major projects in New York, Boston, San Francisco and Chicago have buoyed the stock price in 2018 and 2019, we opine that not only were these projects of low margin, but that management has been less than forthcoming with missed milestones and delays with these major projects.

After going through countless filings, earnings calls and presentations, we believe that Cubic management has been using a variety of accounting gimmicks to turn around a company that previously reported depressed margins and earnings. Based on our extensive experience researching accounting frauds, we take issue with both the quantity and scope of financial engineering used by management over the recent years.

When we analyze Cubic's unsavory past, contract assets/liabilities diagnostics, and lackluster cash flow, we find a company that we believe has been manipulating its accounting for significant gains to the income statement. However, in our experience, the manipulation of all these balance sheet accounts points to share price degradation in upcoming periods as these issues tend to violently reverse.

Key Similarities Between Cubic Corporation and Tutor Perini

GlassHouse juxtaposes both Cubic Corporation and the past transgressions of similar construction company Tutor Perini (TPC) which we wrote on 03/17/16. We believe CUB has eerily similar PoC accounting red flags as TPC. **The end result for Tutor Perini is not a pretty one. Litigations, claims, and unapproved change orders have decimated the company, but most importantly the stock price dropped over 80% as a result of management's malfeasance.**

Key Characteristic	Tutor Perini (TPC)	Cubic Corporation (CUB)
Business Strategy	Underbid on large scale projects to win awards. Increase bookings/backlog at the cost of future profits.	Recently won major awards in FY2019, but was considered "low quality" by analysts, as the awards were extremely low margin.
Violations of PoC Accounting	Unbilled AR, unapproved change orders, and claims all rose by double digits for years as the firm fell behind on milestones, but continued to recognize revenue. Now the company is in constant litigation with its clients.	Cubic portrays extremely similar spikes in unbilled AR/contract assets in the last two fiscal years. Delays with major projects corroborate our premature recognition of revenue/PoC accounting thesis.
Deferred Revenues Plummet	Tutor Perini's deferred revenues were on a consistent decline as the firm received less upfront payments for its projects, signaling a low quality of future revenues.	At the end of FY2019, deferred revenues/contract liabilities fell to their lowest absolute value dating back over 10 years, at only $46.2 million.
Free-cash-flow Non-existent	TPC reported a cumulative FCF loss of $352.5 million in the five years proceeding FY2016, as the company could not receive payment for its shoddy work.	CUB reported a cumulative FCF loss of $19.1 million over the last five fiscal years. However, this number has been artificially buoyed by CUB stiffing its suppliers, a one-time sale of its real estate, and factoring its AR during the last fiscal year.
Past Incidents of Restatements	Tutor Perini surprisingly has disclosed no past incidents of restatements.	Dating back to FY2013, Cubic has needed to restate its financials for recognizing revenue prematurely on major projects. We see CUB's current dire situation much worse at this time based on its accounting.
End Result	**TPC's stock recently has plummeted to under $5 this past month. Our thesis came to fruition 100%, with clients refusing to pay TPC for its insufficient work.**	**???????**

Cubic's PoC Accounting Infers Missed Milestones and Delays

When analyzing past long-term contract companies such as Tutor Perini (TPC), a crucial harbinger in determining their future demise lies within its percentage-of-completion (PoC) accounting. When costs in excess of billings surge and inversely billings/deferred revenues decline relative to historical norms, we as analysts/accountants can predict: 1) future shortfalls in sales and earnings, 2) delays and missed milestones are encumbering certain projects, and/or 3) management may be recognizing revenue prematurely.

As such, we find that CUB's receivables and deferred revenues[1] trends all suggest that the company has been less than forthcoming regarding its future outlook. Furthermore, based on restatements made by Cubic due to these exact accounting errors in the past, we currently believe that the company is now in a much worse state than it was prior based on current accounting metrics. While there are new fresh faces at Cubic since its last announcement of restatements, we believe management is up to its same old financial engineering, as its poor earnings quality appears to have intensified.

> *Consider the software company Transaction Systems Architects, which became increasingly aggressive at picking up ever larger portions of its revenue at the front end and smaller portions at the back end. One sign that helped me discover this behavior was that new accounts began appearing on the balance sheet. The is not a good sign. Such accounts as unbilled receivables show up on the balance sheet… a telltale sign of accounting tricks.*
>
> *- Detecting Accounting Gimmicks that Destroy Investments*
> *CFA Institute*

Earnings quality and PoC accounting go hand-in-hand in determining future sales/earnings, as we can turn to balance sheet metrics as a future indication. Furthermore, when dealing with PoC accounting, there is a large emphasis on management subjectivity, estimates, and assumptions when compiling reported results. Focusing on these factors within Cubic's most recent 10K, we highlight the following which pertains to our thesis:

[1] These accounts have been reclassified as "Contract Assets" and "Contract Liabilities" in Q1 2019 related to ASC 606.

Contract Estimates

Use of the cost-to-cost or other similar methods of revenue recognition requires us to make reasonably dependable estimates regarding the revenue and cost associated with the design, manufacture and delivery of our products and services. Revisions or adjustments to estimates of the transaction price, estimated costs at completion and estimated profit or loss of a performance obligation are often required as work progresses under a contract, as experience is gained, as facts and circumstances change and as new information is obtained, even though the scope of work required under the contract may not change. In determining the estimated costs at completion, we have to make assumptions regarding labor productivity and availability, the complexity of the work to be performed, the availability of materials, estimated increases in wages and prices for materials, performance by our subcontractors, and the availability and timing of funding from our customer, among other variables. Revisions or adjustments to our estimated transaction price and estimated costs at completion may also be required if contract modifications occur. The revisions in contract estimates, if significant, can materially affect our results of operations and cash flows, and in some cases result in liabilities to complete contracts in a loss position…

Products and services provided under long-term, fixed-price contracts represented approximately 97% of our sales for 2019. Because of the significance of the judgments and estimation processes, it is likely that materially different amounts could be recorded if we used different assumptions or if our underlying circumstances were to change. For example, if underlying assumptions were to change such that our estimated profit rate at completion for all fixed-price contracts accounted for under the cost-to-cost percentage-of-completion method was higher or lower by one percentage point, our 2019 operating income would have increased or decreased by approximately $6.5 million.

Based on our expertise within this sector, our analysts understand that these 10K excerpts are fairly boilerplate for companies with long-term contracts. However, eerily similar to Tutor Perini (TPC), we believe that Cubic is exhibiting significant adverse trends regarding its percentage-of-completion accounting. Due to the high influence of management (not outside auditors) in determining its own revenues and profits for each period, we believe there is high motivation for Cubic managers to game the system for their benefit, similar to what has happened in the past. Thus, we intend to show in our analysis why we believe the C-Suite at Cubic have been overly sanguine in recognizing recent revenues and profits; all at the expense of future earnings and potential restatements as in the past.

Unusual Growth in Contract Assets Pose a Significant Risk to Future Earnings

The adoption of ASC 606 by Cubic in Q1 2019 caused several changes to the company's income statement and balance sheet, which we will detail throughout this report. With respects to the balance sheet and unbilled receivables, this account basically changed its moniker to "contract assets" from Q1 2019 onward. Therefore, we tracked these amounts over the past five years to find an inauspicious trend, which suggests missed milestones and delays that management has been less than forthcoming with. Again, we point out that this is not a collections issue, however, we believe this is a scope/overruns issue. Thus, our focus is mainly on unbilled receivables rather than billed. Because this is a revenue recognition concern, it bodes much worse for Cubic and its investors in the long run.

For our enthusiast readers, we do not have to emphasize how much our analysts loathe to see unbilled AR growing on the balance sheet of a company. If unbilleds/costs in excess of billings continue to grow and customer advances/billings in excess of costs continue to decline, this creates a cash flow problem, but it also means the following:

1) The company is spending faster than they are billing on their projects
2) The project managers are behind in getting their bills out, and/or
3) The company has costs on the balance sheet that are actually losses such as job overruns or change orders that are not or will not be approved.

In layman's terms, unbilled AR represents revenue that has been recognized by management on the income statement which has not been invoiced or agreed upon by the client yet. Below, GHR lays out Cubic Corporation's adverse contract assets trends, which we believe are a threat to CUB's future persistence of earnings:

In the latest period (Q1 FY2020), 3M unbilled DSO[2] rose by 10.4% YOY to a five-year high value of 93 days. Longer-term trends display 12M unbilled DSO rising by 10.3% YOY to 75 days, also representing a five-year high for the company (see Table 1, Page 8).

- Unbilled receivables now account for over 73.8% of current receivables at the end of Q1 FY2020. This represents the third-highest value reported by Cubic in the last five-years (max 76.1% in Q3 FY2015).

[2] Three-month unbilled days sales outstanding (3M unbilled DSO) = Average current unbilled AR QOQ / 3M Sales * 91.25. Twelve-month unbilled days sales outstanding (12M DSO) = Average current unbilled AR YOY / 12M Sales * 365.

Table 1: Unbilled Receivables/Contract Assets Metrics
($ in millions)

Period Ended:	Q1 2020	Q4 2019	Q3 2019	Q2 2019	Q1 2019
Unbilled AR	$320.2	$349.6	$275.4	$296.9	$320.3
Unbilled to Total AR (%)	73.8%	73.3%	60.4%	65.1%	72.8%
Unbilled 3M DSO (days)	93	61	68	83	84
Unbilled to 12M DSO (days)	75	72	70	68	68
YOY					
Unbilled AR (%)	0.0%	43.9%	34.4%	74.2%	36.0%
Unbilled to Total AR (bps)	108	1,254	-196	1,023	1,505
Unbilled 3M DSO (%)	10.4%	12.5%	18.0%	25.5%	8.5%
Unbilled to 12M DSO (%)	10.3%	14.7%	11.1%	2.3%	-6.8%

- When we analyze CUB's balance sheet, we see a multitude of moving parts with the firm's unbilled receivables and long-term contract receivables, due to ASC 606 in 2019. Therefore, we need to be cognizant of the higher risk long-term AR accounts as well in our calculations. When including all of the balance sheet accounts of Contract Assets, Long-term Contract Receivables, Long-term Contracts Financing Receivables (including VIEs), and Long-term Capitalized Contract Costs (including VIEs), Cubic's earnings quality related to its PoC accounting continues to worsen.

- Accounting for the aforementioned line-items (which we will label "Total Contract Assets" or "Total CA"), we calculate that total contract assets increased by 14.4% YOY to $478.4 million in Q1 FY2020[3] (49.6% YOY to $501.4 million at Q4 FY2019).[4]

- As a result, total contract assets increased by 851 bps YOY to 145.5%, relative to 3M sales at the end of Q1 FY2020. This value now stands 1,372 bps above the five-year seasonal average of 131.8% and reached a new five-year high in the quarter. Furthermore, total CA reached the third-highest value (31.5%) reported in any period relative to 12M sales in the past five years.

[3] Contract Assets $320.2 million, Long-term Contracts Financing Receivables $158.3 million.
[4] Contract Assets $349.6 million, Long-term Contracts Financing Receivables $151.8 million.

- When monitoring CUB's total CA using the days-sales-outstanding (DSO)[5] calculation, the unfavorable trends are the same. Currently, total CA levels have risen double-digits to 136 days and 106 days of 3M and 12M total DSO, respectively (see Table 2, below).

- Both these levels also stand at the firm's five-year maximum. Sparking high concern, the last time Cubic reported a total CA DSO value over 100 was in 2014, when the company needed to restate its financials due to revenue recognition errors (as discussed later in our report).

Table 2: Total Contract Assets Metrics
($ in millions)

Period Ended:	Q1 2020	Q4 2019	Q3 2019	Q2 2019	Q1 2019
Total Contract Assets (CA)	$478.4	$501.4	$404.5	$407.5	$418.2
Total CA to 3M Sales (%)	145.5%	106.4%	105.7%	120.8%	137.0%
Total CA to 12M Sales (%)	31.5%	33.5%	28.8%	30.9%	33.2%
Total CA 3M DSO (days)	136	88	97	112	113
Total CA 12M DSO (days)	106	101	97	94	93
YOY					
Total Contract Assets (%)	14.4%	49.6%	38.4%	63.9%	36.0%
Total CA to 3M Sales (bps)	851	1,812	701	3,154	1,324
Total CA to 12M Sales (bps)	–172	564	385	914	555
Total CA 3M DSO (%)	20.7%	16.3%	16.2%	22.6%	7.9%
Total CA 12M DSO (%)	14.3%	15.0%	10.9%	3.1%	-5.9%

Contrary to Cubic's Contract Assets Spike, Contract Liabilities Plummet

When analyzing companies that have a spiking unbilled receivables balance, we also need to review the firm's customer advances on the balance sheet. If the firm is pulling in more cash in the form of customer advances, this usually alleviates most our concern for the unbilled AR increase. This is not the case for Cubic.

[5] Three-month days sales outstanding (3M DSO) = Average total AR (no billed AR) QOQ / 3M Sales * 91.25.
Twelve-month days sales outstanding (12M DSO) = Average total AR (no billed AR) YOY / 12M Sales * 365.

Below we detail CUB's recent adverse contract liabilities (CL) trends:

- When analyzing contract liability balances, we calculate that total CL *decreased* by 10.3% YOY to only $62.5 million. We find this balance to be extremely diminutive relative to the company's history and total sales. From a quality of revenue standpoint, CUB managers and outside analysts should hope for this number to be greatly increasing, as it represents future revenues on the income statement.

- Relative to 3M sales, CL has decreased by 383 bps YOY to only 19.0% of sales; representing the lowest seasonal ratio in the last five years (see Table 3, Page 11). Longer-term metrics report similar disparaging trends with CL falling 142 bps YOY to only 4.1% of 12M sales; again, one of the lowest reported figures in the last 10 years.

- Days-of-deferred revenues (DDR)[6] also reported material degradation by falling 30.7% YOY to only 15 days. Both 3M and 12M figures represented a new seasonal five-year low.

- While management has been mostly mute about this concerning trend in contract liabilities, Cubic's 2019 Annual Report offers some insight into the persistent decline:

> Contract liabilities decreased $24.0 million during the twelve months ended September 30, 2019, due to revenue recognition in excess of payments received on these performance obligations. During the twelve-month period ended September 30, 2019, we recognized $62.4 million of our contract liabilities at October 1, 2018 as revenue. We expect our contract liabilities to be recognized as revenue over the next twelve months.

- We see the above excerpt as a fancy way of saying that the firm recognized most of the balance as revenue already on its income statement and the company has not replenished it with new customer advances. As accountants, we see this as a material headwind for future sales, contrasting with CUB's management's rosy outlook for 2020.

[6] Three-month days of deferred revenue (3M DDR) = Average total customer advances QOQ / 3M Sales * 91.25. Twelve-month days of deferred revenue (12M DDR) = Average total customer advances YOY / 12M Sales * 365.

Table 3: Customer Advances/Contract Liabilities Metrics
($ in millions)

Period Ended:	Q1 2020	Q4 2019	Q3 2019	Q2 2019	Q1 2019
Customer Advances (both ST & LT)	$62.5	$46.2	$62.3	$78.4	$69.7
CA-to-3M sales (%)	19.0%	9.8%	16.3%	23.2%	22.8%
CA-to-12M sales (%)	4.1%	3.1%	4.4%	5.9%	5.5%
3M DDR (days)	15	10	17	20	22
12M DDR (days)	15	16	18	19	19
YOY					
Customer Advances (%)	-10.3%	-39.2%	9.7%	10.8%	28.0%
CA-to-3M sales (bps)	-383	-1,020	-289	-216	92
CA-to-12M sales (bps)	-142	-323	-41	-25	64
3M DDR (%)	-30.7%	-34.2%	-14.6%	-2.3%	7.2%
12M DDR (%)	-19.3%	-14.9%	-2.8%	1.2%	0.4%

Net Contract Assets Spike 75.6% YOY in FY2019

As stated above, our analysts like to judge unbilled receivables and customer advances trends to get a full picture of the firm's quality of revenues. In most cases, we expect to see companies with a net balance near $0 or negative, meaning the firm's customer advances is above unbilled AR. This is not the case for Cubic as shown by our calculations below:

- We calculate Cubic's net contract assets (CA) as total contract assets net of total contract liabilities. In Cubic's case, net CA reached its second-highest absolute value in company history surging by 19.4% YOY to $415.9 million as of Q1 FY2020.

- As a result, relative to quarterly sales, net CA jumped by 1,234 bps YOY to 126.5%, representing the highest ratio reached in any Q1. Net CA-to-12M sales reported the third-highest value reached in the last five years reaching 27.4% for Cubic.

- Overall, the continued increase of unbilled AR, coupled with the deterioration of unearned revenue metrics, lead us to believe that the quality of Cubic's recent sales is extremely low. Based on our experience, we expect to see a material drop off in revenues in future periods as a result. This is corroborated by the material drop off in bookings and backlog, which we will discuss later. Although this type of financial engineering can provide short-term boosts to revenues and earnings, these type of accounting tactics ALWAYS reverse badly.

- When we examine Cubic's past, we see how management focused on the important performance metric of "Net AR days"[7] when things were trending well for the company. For example, here is CUB's former CFO discussing this important earnings quality metric on the Q4 2015 earnings call:

> Now turning to the key balance sheet and cash flow data on Slide 14. Cash, restricted cash, marketable securities totaling -- totaled $318.3 million at year-end. $295.4 million was held offshore by our foreign subsidiaries. AR days, net of cash advances, improved to 69 days in FY '15, down from 74 days in FY '14.

- However, since this time, these key metrics were barely spoken of again, probably because of the persistent negative trends Cubic has reported in the last two to three years. Illustrating this trend using the same Cubic calculation given, net AR is now up to $371.2 million. As a result, 3M net AR days have increased by 8.2% YOY to 111 days, representing the second-highest value reported by Cubic in the last five-years. Twelve-month net AR days have also increased by 7.0% to 93 days, dwarfing the previous values from only three years earlier.[8] This value is also the fourth-highest value reported by CUB in the last 10 years.

- To quantify the impact that recognizing this revenue earlier relative to historical standards has had on performance, we can reverse engineer CUB's net CA balance using the firm's 12M net DSO value reported in Q1 FY2019 (74 days). As a result, we calculate that CUB recognized an astonishing $108.5 million more in revenue (also pure margin gains) over the TTM ($173.9 million in FY2019).

- Without this $108.5 million tailwind, organic revenue would have declined greatly in 2019, missing management's given outlook by a mile! This substantial amount also dwarfs the reported operating profit figure of $76.4 million in FY2019, which suggests operating profits would be at a loss if not for these artificial gains.

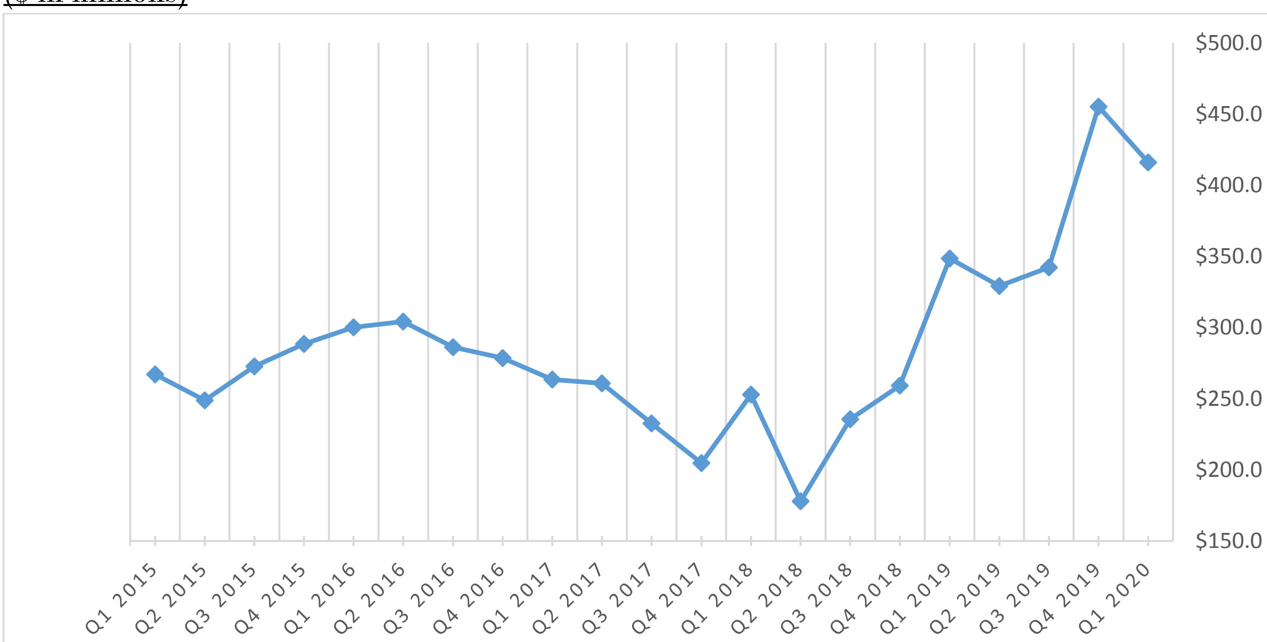
[7] Calculated as current billed and unbilled receivables net of customer advances.

[8] Three-month days of net AR days = Average total current AR - customer advances QOQ / 3M Sales * 91.25. Twelve-month days of net AR days = Average total current AR - customer advances YOY / 12M Sales * 365.

Table 4: Net Contract Assets Metrics
($ in millions)

Period Ended:	Q1 2020	Q4 2019	Q3 2019	Q2 2019	Q1 2019
Net Contract Assets (CA)	$415.9	$455.2	$342.3	$329.1	$348.5
Net CA-to-3M sales (%)	126.5%	96.6%	89.4%	97.6%	114.2%
Net CA-to-12M sales (%)	27.4%	30.4%	24.4%	25.0%	27.7%
Net CA 3M DSO (days)	121	77	80	92	91
Net CA 12M DSO (days)	91	85	79	75	74
YOY					
Net Contract Assets (%)	19.4%	75.6%	45.3%	85.0%	37.8%
Net CA-to-3M sales (bps)	1,234	2,832	991	3,370	1,233
Net CA-to-12M sales (bps)	-30	886	427	939	491
Net CA 3M DSO (%)	33.1%	29.9%	25.7%	29.9%	8.0%
Net CA 12M DSO (%)	23.0%	23.3%	14.5%	3.6%	-7.4%

Chart 1: Long-Term Net Contract Assets Trends
($ in millions)



Changes in Estimates and Assumptions Result in Material Losses in FY2018 & FY2019

According to Cubic's own 10K filing, the firm "needs to make revisions or adjustments to our estimated transaction price and estimated costs at completion may also be required if contract modifications occur. The revisions in contract estimates, if significant, can materially affect our results of operations and cash flows, in some cases result in liabilities to complete contracts in a loss position."

Over the past two years, Cubic has needed to revise its contract estimates downward by material amounts. Specifically, in the most recent period, CUB reported a $6.17 million reduction of operating income; this resulted in a $5.76 million decrease in net income ($0.18 in EPS).

Looking at longer-term trends, CUB needed to reduce its operating income by $2.2 million ($0.08 in EPS) and $7.0 million ($0.19 in EPS) in FY2019 and FY2018, respectively (see Table 5, below). GlassHouse Research intends to show that Cubic will continue to face periods of negative adjustments, which will continue to weigh on earnings. In fact, we believe that future restatements may be in order to rectify accounting irregularities found within this report.

From CUB's annual report, the company records unfavorable estimates "based on labor productivity and availability, the complexity of the work to be performed, the availability of materials, estimated increases in wages and prices for materials, performance by our subcontractors, and the availability and timing of funding from our customer, among other variables, etc., but most importantly schedule and performance delays." Therefore, through the use of PoC accounting, we can analyze if CUB is staying ahead of its milestones or falling behind, and we find the latter to be true. GHR would like to reiterate that Cubic's problems do not stem from collection issues. Instead, their problems revolve around recognizing revenue too early in their respective contracts. The result will be a significant reversal of sales and earnings in future periods, where these last two years of negative revisions may just be the beginning.

Table 5: Cubic Change in Estimates
($ in millions)

Period Ended:	Q1 2020	2019	2018	2017	2016	2015
Operating Income Δ	–$6.17	–$2.24	–$6.99	$5.74	–$0.90	–$14.5
Net Income Δ	-$5.76	–$2.35	–$5.15	$3.21	–$0.50	–$8.00
EPS Δ	-$0.18	–$0.08	–$0.19	$0.12	–$0.02	–$0.30

<u>Delays, Cost Overruns, and COVID-19 will Lead to Cubic's Demise</u>

While it is easy to point out how airlines, restaurants, hotels, and cruise lines will be highly affected by the recent COVID-19 virus, Cubic is a name that falls under the radar. However, the virus will have *massive* implications on its business. In two sell-side research reports from JP Morgan (03/09/20) and Canaccord Genuity (03/19/20), both analysts downplayed the COVID-19 Virus' impact on the overall company. Specifically, JP Morgan called Cubic Corp a "relative safe haven" as the analyst believed CUB was insulated from *China*. However, since the date of this report, the United States has gone into significant lockdown in major metropolitan areas where Cubic's work is performed. The drastic measures that the U.S. has taken since this report was released invalidates much of the bullish case detailed in the note.

According to Canaccord's note, Cubic management stated, "They do not anticipate any major cash flow issues in the next couple of quarters, considering that their customers are primarily the DoD, foreign militaries and municipal government entities." As GHR has analyzed many companies in the past with government customers, it is not the payment ability of the DoD that concerns us, but rather the agreeing upon scope and price that is an issue. Furthermore, if cash flow was not an issue, why would the company need to restructure its debt on 03/30/20?

Specifically, Cubic restructured and increased its debt load (now over $600 million) in order to put off debt payments on their prior Prudential Notes. While GHR does not believe there is current liquidity risk due to Cubic's large credit revolver ($850 million), we believe that Cubic's continued low margins and weak free-cash-flow may lead the company to insolvency in future years when much of the debt matures.

Overall, this ties in with our thesis and will accelerate Cubic's missed milestones and cause delays on all their major projects. <u>While the company will surely blame the original missed milestones on the virus, this is not a transitory item for the company, and when the virus subsides, Cubic will still be in shambles</u>. Four years ago, GlassHouse saw many of the same transgressions with the construction company Tutor Perini (TPC), which is now on the verge of bankruptcy.

Below, we will go through each recent major Cubic project and detail the complications that the company has encountered:

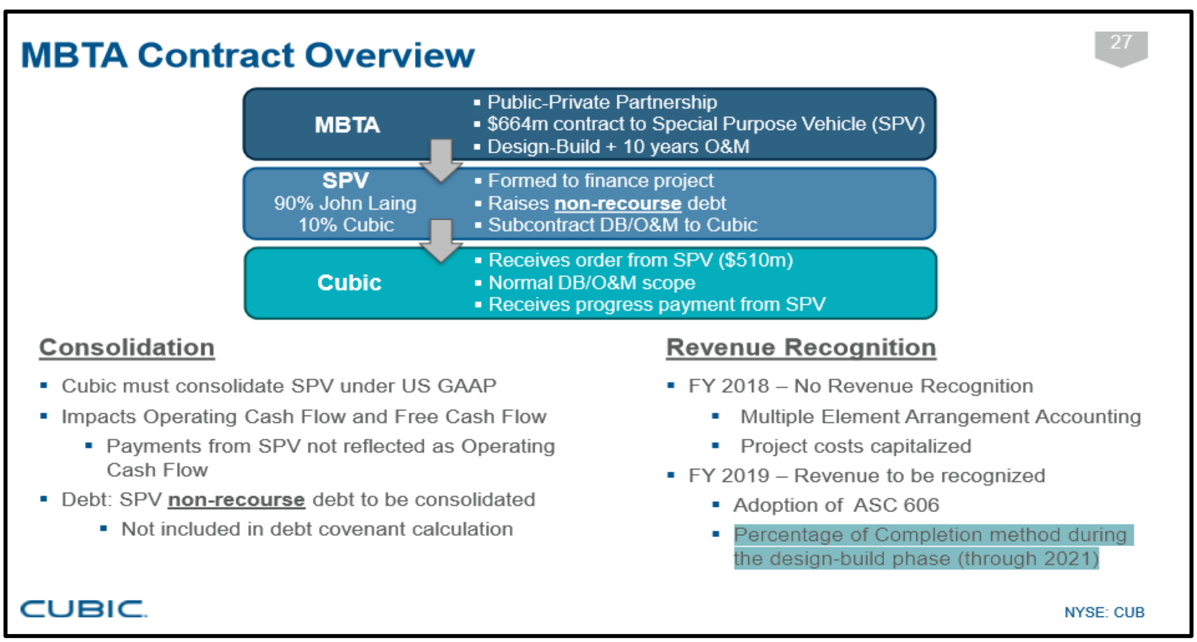
Massachusetts Bay Transportation Authority, MBTA

The MBTA project being facilitated by Cubic has been a disaster. While management continues to downplay this project's negative impact during each conference call, we have found evidence to support continued delays with no end in sight. While Cubic's PoC accounting can point us to milestone delays and cost overruns, GHR can corroborate it with local news not detailed by the company.

To illustrate this, GHR dissects a recent Boston Globe article (12/09/19), "MBTA's new fare system will be years late, and cost a lot more money." The article states that this project will go years over schedule and cost hundreds of millions more than budgeted. Although this increase in cost does not go directly into Cubic's pockets. These types of claims/unapproved change orders will be disputed back and forth between the MBTA and Cubic before any cash is paid out.

Originally, the MBTA and Cubic planned to have the new fare system technology in place by 2021; it has now been pushed back to 2024 in a staggered rollout. Moreover, when a transit official was asked at a hearing whether the cost could balloon from around $700 million to closer to a billion, the transit authority simply answered, "Yes."

Excerpt 1: MBTA Contract Overview[9]



[9] From Q4 FY2018 Cubic Presentation Slides

While originally, the company planned to recognized revenue under the PoC method of accounting through 2021 (see above), we now know that the firm will be working on this project through 2024. Therefore, the firm has been recognizing revenue on this project upfront, but will need to have material expenditures that go into 2024, displaying the crux of our thesis.

This is not profit for Cubic Corporation, rather money wasted on both ends as the company continues to falter on its promises. While the original fare readers were to fully replace the old system by 2021, technological glitches with Cubic fare readers and claims with the city continued to cause milestone delays. These delays have also caused city officials to debate doing away with fares all together, a la Kansas City. Finally, while the governor of Massachusetts has not issued a "shelter-in-place" pronouncement at the time of this report release, we imagine that COVID-19 will continue to delay projects for the MBTA and Cubic.

Chicago Ventra

In Q1 FY2020, Cubic won a five-year $377 million extension to upgrade Chicago's Ventra fare collection system (to Ventra 3.0). During the most recent earnings call, CFO Bradley Feldmann stated the following regarding the extension award:

> In the first quarter, we booked a 5-year extension to upgrade Chicago's Ventra fare collection system for $323 million plus financing costs totaling $377 million. As we discussed on our November earnings call, Ventra 3.0 will continue to position the Chicago Transit Authority as the cutting-edge of transient payment technology with enhancements of account management features, equipment replacement and the implementation of open architecture standards with APIs to set the foundation for Mobility as a Service.

While the CFO is quick to paint a rosy picture regarding Chicago's Ventra system, the company's previous work on the Ventra system was deemed a failure by the city, with continued cost overruns and delays dating back to 2013. Most of the issues are detailed in the following Chicago news articles:

Ventra's Cubic Partner Also Has Long History of Fare Card Troubles
Ventra's Parent Company (Cubic): An International History of Fare Card Glitches
CTA Announces Steps to Address Ventra Issues

Unreliability of the readers, double-transactions, hidden fees, and technical glitches all cost the city of Chicago and Cubic millions of dollars in change orders/delays throughout the last upgrade cycle. During the last debacle, the city also stated, “Further, until Cubic addresses the existing issues, the company will receive no payment from the CTA”.

OMNY System (New York)

Discussed in the latest earnings call by management, CUB was in a major “ramp up” stage for its OMNY system upgrade in New York. With this upgrade, the OMNY will eventually have a system in place to tap credit cards or phones in order to pay for a fare. This contrasts from the current system which uses the previous yellow OMNY card bought from subway machines.

With the recent “shelter in pace” pronouncement by Governor Cuomo last week, only essential businesses will be allowed to operate, putting CUB’s work on the OMNY system at a standstill in its major ramp up period.

However, even without the recent shutdown, Cubic faced high scrutiny for the work it has performed so far on the OMNY system. The links below detail the constant subpar work that CUB has been performing:

Beset by Decay and Delays, the Nation’s Largest Transit System is Spending $540 million
The NYC Subway’s New Tap-To-Pay System has a Hidden Cost – Rider Data
Some Subway Riders are Being Double-Charged Thanks to Greedy OMNY Scanners

New York and Cubic plan to roll out the full system slowly and in piecemeal, starting with a pilot program on a portion of the Lexington Avenue 4, 5, and 6 lines. However, if the initial pilot has produced such problems, we cannot imagine how the system will react after the full ramp up, especially with Cubic’s storied history of cost overruns on these projects.

Our final thought with Cubic undertaking these projects is that they all corroborate our PoC accounting thesis. Costs overruns, unapproved change orders and delays are running rampant with these major projects currently underway. Based on the numbers, we believe that revenue has been recognized upfront and prematurely on many projects, and will cause a massive shortfall in future periods. Exacerbating the issue, COVID-19 will essentially hinder work on all of these projects in major metropolitan areas, increasing the costs for all current projects.

Goal 2020 is Reached with Aesthetic Figures

Goal 2020 was unveiled after a tumultuous time for Cubic in late FY2015. At the beginning of that fiscal year, the management team was dealing with significant restatements due to errors related to their revenue recognition (as discussed in the next section). CEO Bradley Feldmann and prior CFO John Thomas then disclosed Goal 2020, which gave qualitative targets of bigger awards with higher margins, while also targeting 10%+ annual growth on the top line.

In later conference calls, Goal 2020 evolved into 1) exceeding $2 billion in revenue (through organic growth and acquisitions) by the end of 2020, 2) achieving 10% overall growth per year, and 3) reaching operating margins above 10%. Finally, the company emphasized that there would be continued focus on "One Cubic," which set out for cohesiveness among all the segments. Related to this, Cubic embraced a new ERP system that was intended to reduce expenses and expand margins going forward.

While management has recently patted themselves on the back for a job well done regarding Goal 2020, GHR will show how management failed to reach most of these targets, mostly by a wide margin.

Cubic Turns to Growth Through Acquisitions to Hit Targets

While management only provided a 10%+ annual growth percentage and a $2 billion revenue target, they disclosed a qualitative stance of getting it from both organic and inorganic sources. We find this to be highly disingenuous as it could motivate management to make non-accretive acquisitions in order to make arbitrary targets with salary bonuses on the line, as discussed later.

- As the reader can see in Table 6, Page 21, Cubic reported revenue increases of 1.6% and 2.2% (adjusting for Defense Services divestiture) in FY2017 and FY2016, respectively, much lower than the desired target rate. On an organic basis the numbers were even worse, with sales *falling* 1.4% and 0.8% FY2017 and FY2016, respectively. Operating margins were also nowhere near management goals, reporting depressed percentages of 0.2% and –1.1%, respectively.

- It appears that the greatly missed sales target (as well as other missed goals) played a role in Cubic terminating then CFO John Thomas from his position in mid-2017. With a new CFO in place, Anshooman Aga, it appears that Cubic began to employ a new strategy of acquire and grow by any means necessary. For example, in FY2018/2019, Cubic spent a mind-numbing $410.2 million on acquisitions (GRIDSMART, Trafficware, Nuvotronics, Shield Aviation, MotionDSP), and has also just fully acquired PIXIA Corp. and Delerrok Inc.), which dwarfs any period in company history.

- Furthermore, in FY2018, the company scored major award wins that propelled sales higher. Reported top-line growth reached 24.4% and 8.6% in FY2019 and FY2018, finally surpassing management's sales goals set back in FY2015.

- But these numbers do not tell the whole story. For example, when we consider the impact of the new accounting standard ASC 606, this accounting change contributed $109.2 million sales for CUB in FY2019. In addition, the firm attributed $83.3 million in sales from acquisitions, or non-organic sources in the fiscal year. When only factoring in organic sources, sales only grew 8.4% and 8.5% in FY2019 and FY2018, not reaching their desired 10% target.

- Factoring our own percentage-of-completion adjustments from our prior analysis puts Cubic's revenue growth in a much worse place. Adjusting for our artificial gain estimates, sales *fell* by 6.1% in FY2019. Using the same methodology for Q1 FY2020, we estimate that PoC adjustments accounted for $40.6 million of revenue gains in the period. Removing this adjustment, we estimate that sales would have fallen by 19.3% if not for these aesthetic gains.

- The divestiture of CUB's Defense Services segment also caused management to revise their previous $2 billion revenue goal down to $1.55—$2.00 billion during the Q3 2018 earnings call. With pre-ASC 606 sales of $1.39 billion in FY2019 and the previous CGD segment having a run-rate of approximately $375 million in sales, we estimate that FY2019 would have been $1.77 billion in FY2019 if CUB would have not divested this division. Therefore, we find it highly improbable that CUB would be able to grow sales by approximately 13.1% in FY2020 to reach their previous $2 billion goal, without the use of heavy acquisitions, another situation where management moved goal posts to reach prior given estimates.

- Finally, when we analyze operating margin excluding ASC 606, the firm only produced margins of 4.8% and 2.0% in FY2019 and FY2018, respectively, falling well short of stated targets.

Table 6: Organic Sales Analysis

Period Ended:	Q1 2020	2019	2018	2017	2016	2015
Sales Growth (excluding disc. op.)	7.7%	24.4%	8.6%	1.6%	2.2%	2.3%
Organic Growth Rate[10]	5.4%	8.4%	8.5%	-1.4%	-0.8%	-1.7%
GHR Adjusted Organic Growth Rate	-19.3%	-6.1%				

Cubic Moves Goal Posts When About to Miss Targets

Coming out of FY2015 and the firm's infamous restatements, management provided annual performance targets to go along with the disclosed Goal 2020. We will go year by year to show how management either missed guidance badly or changed their metrics to reach guidance.

- **FY2016 Guidance**: At the end of FY2015, CUB gave sales guidance with a mid-point of $1.475 billion, EBITDA of $92.5 million, adjusted EBITDA of $132.5 million, and GAAP diluted EPS of $1.43.
- CUB actually raised its sales and EBITDA guidance throughout the fiscal year, only to fall short spectacularly as sales came in at $1.46 billion, EBITDA of $44.0 million, adjusted EBITDA of $118.0 million and GAAP EPS of only $0.06.
- GHR finds it peculiar that while CUB missed on all their given targets, they especially missed on targets that were not adjusted… i.e. EBITDA and GAAP EPS.
- Management blamed the miss primarily due to funding delays from the US Department of Defense, specifically higher margin orders in the Mission Solutions and Training Systems within the Global Defense Systems segment.

- **FY2017 Guidance**: At the end of FY2016, CUB provided a sales guidance mid-point of $1.53 billion, EBITDA of $90 million, Adjusted EBITDA of $130 million, operating income of $40 million, and GAAP EPS of $0.60.
- Throughout the year management revised all these projections downward by a considerable margin. Even worse, Cubic removed its GAAP EPS guidance all together due to "US deferred tax valuation allowance variability".
- In the end, CUB missed all their projections again, reporting total sales of only $1.49 billion, EBITDA of $69.0 million, adjusted EBITDA of $105.6 million, operating income of only $2.6 million and GAAP EPS –$0.41.

[10] This growth rate excludes the ASC606 for FY2019 impact and acquisition revenues.

- Most of this carnage was blamed on delayed US government budgets and the timing of the New York MTA contract award. And while Cubic was blaming the GAAP EPS miss largely due to the tax valuation allowance, EBT was already at a loss (–$11.2 million) even before taxes were considered!

- **<u>FY2018 Guidance</u>:** Right on cue, for FY2018, management removed all projections that were not being “adjusted” and just left sales and adjusted EBITBA as their marks. Specifically, CUB predicted a sales midpoint of $1.54 billion and adjusted EBITDA of $122.5 million.
- One quarter into these projections, Cubic needed to revise all its goals materially downward due to the Defense Services divestiture planned in FY2018. With these depressed sales and adjusted EBITDA projects of $1.16 billion and $103 million, respectively, Cubic was able to reach the revised goals.

- **<u>FY2019 Guidance</u>:** Finally, management provided a sales mid-point guidance of $1.41 billion and adjusted EBITDA of $145 million at the end of FY2018. Also, midway through in the year in Q2, management provides another “adjusted” EPS guidance of $3.18 for the year.
- Management was again unable to reach these goals in FY2019, they continued to use “adjusted” proxies that can be easily manipulated. Also, the impact of acquisitions and ASC 606 played a major role in reaching its sales estimates for the year.

CUB is now providing performance proxies which can be highly manipulated through the use of non-GAAP adjustments. When management needed to hit hardline EBITDA or GAAP EPS figures, they either failed to do so or removed the guidance all together. We believe a management that does this cannot be trusted to give an accurate assessment of their company overall, especially when they are highly motivated by bonuses tied to these figures.

Cubic's Free-Cash-Flow Numbers Are Atrocious

Digging into Cubic's free-cash-flow (FCF) numbers, we find an array of adjusted/revised numbers that obfuscate CUB's true earnings ability over time. Discontinued operations, special purpose vehicles, a recent material sale of real estate, factored receivables, delayed payments, and significant acquisitions all convolute the company's free-cash-flow generation (or lack thereof). We intend to show that a premature recognition of revenue has been a material factor in the lack of cash generation in recent years. In fact, if we include the firm's cash spent on acquisitions over the last five and ten years, it is apparent that the company may not ever be able to generate meaningful free-cash-flow for an extended period of time.

Based on our FCF chart (Page 25), investors can see how much cash this company consumes in aggregate. Our thesis also revolves around CUB management winning major projects in FY2018/2019 by bidding on extremely low margins; thus, deviating from the firm's Goal 2020 objectives. If Cubic was winning projects with high margins, we would expect the firm's free-cash-flow to follow the upward trend as well. However, we find a much different story when looking at the firm's total cash generation over time.

- In the most recent quarter, CUB continued to report highly negative FCF even when "adjusted". For example, the firm disclosed an adjusted FCF figure of –$33.7 million in the quarter. This is versus reported FCF of only –$59.4 million in Q1 FY2020.

- While management discloses in the latest earnings call that they will "ramp up [cash generation] next year and in 2022", GHR opines that this company cannot generate any meaningful amount of FCF in the long-term based on its history.

- In FY2019, CUB management again reported two different free-cash-flow numbers; the first reported figure of –$36.0 million and a second "adjusted" amount of +$14.1 million. Management did the same for FY2018 reporting FCF of –$23.1 million and a much more palatable "adjusted" FCF of –$0.7 million (see Chart 2, Page 25). The higher adjusted FCF stems from the firm's Boston SPV project.[11]

[11] Management's decision to include progress payments from the Boston VIE/SPV in its adjusted calculations date back from Q3 2018. Whether we include these payments or not, the long-term end result does not matter. GHR analysts do not agree with including these payments into FCF as Cubic is the primary beneficiary under the Boston SPV; it's akin to Cubic taking a loan out for this project and then paying itself for the work done.
We also find it curious that management is so liberal when adding back cash to free-cash-flow to get it to a positive number for the year, however, when the company sells real estate that is definitely a one-time item, CUB management decides to include the $45.0 million in free-cash-flow in FY2019. Shocking.

- We believe the cash degradation has stemmed from the following items which are corroborated by the firm's annual report 1) Missed milestones and delays causing clients not to be invoiced, 2) extremely low margins on large projects and 3) cash spent on a new ERP system.

- CUB's missed milestones are apparent when we look at the consumption of cash on the firm's cash flow statement. Specifically, in FY2019, Contract Assets, Inventories, Contract Liabilities, and LT Financing Receivables all consumed $83.7 million, $31.5 million, $15.6 million, and $56.6 million, respectively ($187.2 million total).

- These accounts all are specifically tied to major projects and milestone payments. When the company falls behind on milestones on projects with delays or cost overruns, CUB will not get invoiced/paid. If you don't believe GHR, take a look at the company's excerpt from its 10K regarding cash flow:

> The changes in operating cash flows between 2017, 2018 and 2019 were also impacted by the terms of some of our largest customer contracts. Our contract terms with our customers can have a significant impact on our operating cash flows. Contract terms, including payment terms on our long-term development contracts, are customized for each contract based upon negotiations with the respective customer. The customized payment terms on long-term development projects also often include payment milestones based upon such items as the delivery of components of systems, passing specific system design reviews with the customer, or other events defined by the contracts. These milestone payments can vary significantly based upon the negotiated terms of the contracts. Changes in the amount of unbilled accounts receivable and contract assets are reflective of the difference between when costs are incurred and when we are entitled to receive milestone payments.

- Further illustrating this, when we aggregate FCF over the last five years, we find that CUB actually *consumed* $19.1 million in cash.[12] If we include cash acquisitions, the firm consumed an astonishing $781.8 million in FCF. While analysts can make the case not to include acquisitions into free-cash-flow, we believe it is needed to do in serial acquirer companies that can only growth through acquisitions.

- We take issues with companies that, similar to Tutor Perini do not make meaningful amounts of free-cash-flow over the long term. While management will address the situation

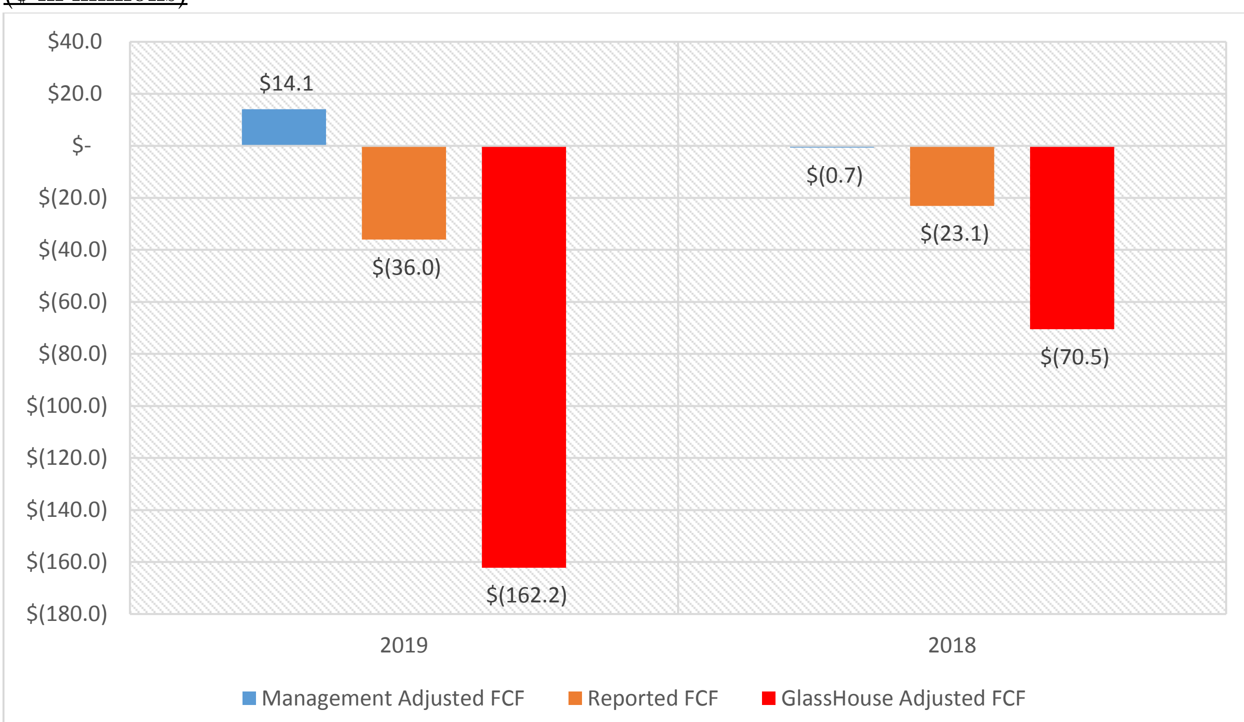
[12] This does not include the Boston SPV progress payments as we believe this is the correct assessment under GAAP.

by saying the company is spending for future growth, we believe that management has run out of options to grow the company and has looked to inorganic growth through anemic acquisitions in addition to recognizing revenue prematurely within recent years.

- Furthermore, we have found that CUB management has financially engineered its cash flow in other ways in order to cosmetically boost this metric. For example, in the footnotes of the firm's annual report, we find that the first time this year management decided to factor its receivables for a one-time cash boost of $31.1 million.

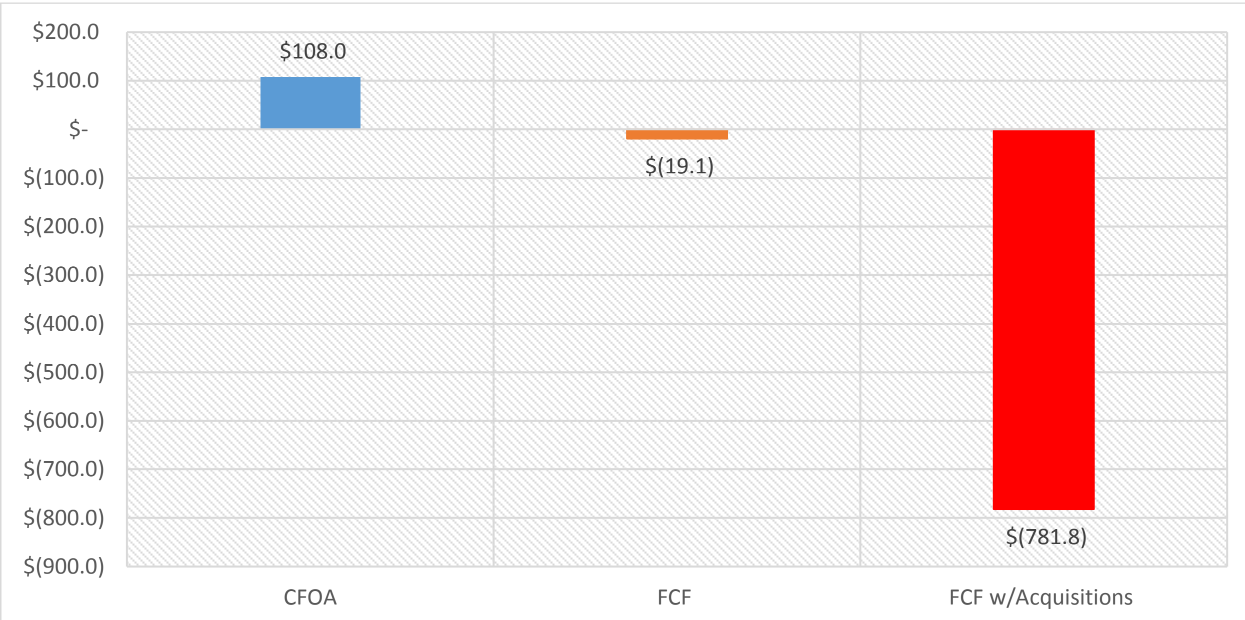
- Finally, we found that the firm's days-payable-outstanding (DPO) metric has risen from only 18 days in FY2016 to currently 48 days. We do not believe failing to pay your suppliers constitutes as organic free-cash-flow generation – as such we calculate that Cubic Corp stiffing their suppliers boosted cash flow by $50.2 million and $47.4 million in FY2019 and FY2018, respectively.[13]

Chart 2: Free Cash Flow Analysis
($ in millions)



[13] GlassHouse Adjusted CFOA excludes the one-time factoring of $31.1 million in receivables, the one-time sale of real estate ($44.9 million) and also adjusts for the unsustainable delaying of payables to suppliers of $50.2 million and $47.4 million in FY2019 and FY2018, respectively.

Chart 3: Reported Five-Year Accumulated Cash Flow Analysis
($ in millions)



Backlog/Bookings Drop Off a Cliff in FY2019

Delving into Cubic's recent backlog and bookings trends, we find that the company did a good job securing awards in FY2018. The company secured pipeline wins with New York, Boston, San Francisco and Brisbane. Due to this, CUB reported substantial increases in both bookings and backlog in FY2018. Where many analysts expected this run to continue, it appeared that most of these wins were anomalies and unfortunately not sustainable at Cubic.

We base this opinion on a few factors. First, the company reported a highly material decline in bookings and backlog in FY2019. Additionally, we believe that management possessed high motivation to increase the top line to keep to their Goal 2020 schedule, even at the cost of lower margin wins. Finally, based on our aforementioned percentage-of-completion accounting analysis, we believe that the company may have bit off more than it could chew with all these new major projects simultaneously. We detail our analysis below:

- In FY2018, CUB's Transportation, Mission and Defense segments increased their bookings by 183.8%, 23.6%, and 20.4%, respectively. As a result, the firm's consolidated backlog increased by 60.2% to $4.06 billion at 09/30/18. These amounts were mainly driven by a San Francisco Bay area $394 million win, in addition to New York (OMNY), Boston, and Brisbane awards.

- While management cheered these awards as new path to Goal 2020 in the Q4 2018 earnings call. Some analysts believed that these wins were of low quality. Specifically, an analyst from William Blair stated:

> A lot has been made about a lack of formidable competition for Cubic in public transit payments. I'm playing devil's advocate. Skeptics believe that the reason there weren't more bidders for San Francisco and Boston is because the margins are low. Can you provide your perspective on why there weren't more bidders for some of these large contracts? And related to this, in London and Chicago?

- Just as quickly these awards came in, they quickly dissipated throughout FY2019, while management blamed the decline on the unusually large comparables in the prior year. Specifically, full-year bookings fell by 63.9% to only $1.00 billion. This compares unfavorably with sales at $1.50 billion, for a depressed book-to-bill ratio of 0.67x (see Table 7, Page 29). As a result, backlog fell by 16.3% YOY to $3.40 billion.

- The main culprit stemmed from the Transportation segment which had bookings fall by an astonishing 82.3% to $397.3 million (down from $2.24 billion in FY2018). This results in an anemic book-to-bill ratio of only 0.47x.

- CEO Bradley Feldmann discussed the backlog decline in the most recent earnings call:

> So a lot of the backlog is down because the revenue was way up. So they shipped out an awful lot this year and we're in CMS, and we're very proud of the growth. They have programs of record. And when we get a budget that those orders will come in and we intend to ship them this year and it will be somewhat backloaded again as well. In the defense training business, you might note that we, just after the fiscal year booked, I think, about $115 million of new work. And so that will -- is less susceptible to shipment-based revenue calculations. It's cost-on-cost. And so it will be less back-end-loaded and will grow throughout the remainder of the year.

- While Mr. Feldmann appears to be highly optimistic about CUB's future prospects, our analysts look at this a different way. Based on CUB's accounting, we believe that the company overextended themselves and have now run into delays and overruns as discussed in the prior section. This premature recognition of revenue would cause backlog to decrease greatly, as the company is still inundated with prior work.

- In the latest period, CUB was able to increase its 3M bookings by 300.3% YOY to $597.3 million (12M bookings still fell by 33.6% YOY to $1.45 billion). Most of this gain was attributable to a five-year extension to upgrade Chicago's Ventra fare collection system for $377.0 million in awards. However, the firm's backlog continued to fall on a YOY basis to only $3.72 billion as of Q1 FY2020. With one of CUB's largest contracts (Chicago) now booked, we fail to see any major projects that will buoy Cubic's backlog in the future.

Table 7: Annual Segment Booking/Backlog Analysis
($ in millions)

Period Ended:	2019	2018	2017
Cubic Transportation Systems (CTS)			
Bookings	$397.3	$2,239.0	$789.0
Book-to-bill	0.47	3.34	1.36
Backlog	$2,953.3	$3,544.9	$2,043.9
Cubic Mission Systems (CMS)			
Bookings	$353.3	$213.4	$172.7
Book-to-bill	1.07	1.03	1.02
Backlog	$103.7	$77.0	$72.3
Cubic Global Defense Systems (CGD)			
Bookings	$251.8	$327.5	$271.9
Book-to-bill	0.79	1.01	0.75
Backlog	$344.0	$442.6	$420.3
Consolidated Cubic			
Bookings	$1,002.4	$2,779.9	$1,233.6
Book-to-bill	0.67	2.31	1.11
Backlog	$3,401.0	$4,064.5	$2,536.5

Cubic Financial Statements Cannot Be Relied Upon

Dating back to FY2015 and again in FY2012, Cubic Corporation's audit committee concluded that previously issued financial statements contained material errors and should be restated. Based upon the consideration and assessment of the errors related to accounting revenue recognition methods, auditors also identified material weaknesses in internal controls over financial reporting for those periods. While these restatements are a bit dated, we bring them up to show that this company has a history of aggressive accounting that has caused harm to their investors. If a company has a checkered past of prior errors and restatements, it puts us on high alert that the company is capable of doing it again, especially when their earnings quality metrics are worse than before!

First reported errors/restatements attributable to revenue recognition policies: Going back to FY2012, Cubic needed to restate four prior years of financial statements due to… you guessed it, their revenue recognition policy on its long-term contracts. Historically, CUB recognized sales and profits for development contracts using the cost-to-cost PoC method of accounting. However, after this was performed, it was modified by a "formulary adjustment." This adjustment was in violation of GAAP. Sales and profits should have been recognized based on the ratio of costs incurred to estimated total costs at completion, without any "formulary adjustment."

At that time, CUB also concluded that in the process of assessing the appropriate accounting treatment for revenue and costs for certain contracts with clients, the firm did not maintain a sufficient number of personnel with an appropriate level of knowledge and experience or ongoing training in GAAP to prevent or detect material misstatements in sales or COGS in a timely manner. Cubic then detailed a remediation plan to resolve the material weaknesses at that time, although based on its subsequent future, it does not appear that CUB learned their lesson.

SEC correspondence regarding both unbilled AR and revenue recognition policies: Congruent with the company's restatements at that time, CUB was in correspondence with the SEC regarding both their unbilled receivables and revenue recognition policies, a theme we see throughout the history of CUB and in this report. On 01/31/13, the SEC sent CUB a series of questions stemming from a review of its FY2012 Annual Report. Specifically, a line of questioning related to Cubic's liquidity and capital resources, revenue recognition policy, inventories, and plans for remediation of their material weakness.

Relating to our thesis of outsized contract assets (unbilled AR) and a significant decrease in contract liabilities (customer advances), the SEC queried, "You disclose in the first paragraph of this section that the growth in accounts receivable and the reduction of customer advances related to several large contracts you worked on in 2012. We also note the disclosure in Note 6 on page 79. With a view toward disclosure in future filings, please explain further the significant causes for the increase, including a discussion of any changes in your historical contract terms (for example, change in payment or billing terms)."

It is obvious to GHR that the SEC is highly focused on whether management was pulling revenue forward from future periods to aesthetically enhance earnings. However, Cubic appears not to have satisfied the SEC's queries with the following non-answer on 03/10/13, "We respectfully submit to the Staff that there have been no changes in payment or billing terms on existing contracts that have significantly impacted the growth in our accounts receivable or the reduction in customer advance balances."

New management, same errors/restatements: You would have thought that CUB management would have learned their lesson and hired sufficient accounting personnel, however, just a few years later on 02/17/15, the newly appointed CEO and CFO of Cubic put out a press release stating that it would be unable to file its 10Q filing by its deadline. This was attributable to an investigation into the procedures of programs that are accounted for under the percentage-of-completion method. Subsequently, the audit committee determined that Cubic inappropriately reduced the estimated costs to complete contracts within the CGD Systems segment. As a result, the overstatement of CGD Systems segment sales and operating income by approximately $750,000 in Q4 2014.

However, after finding/correcting this error, the committee also found other errors with respect to revenue recognition that resulted in the overstatement of operating income of $1.6 million in FY2014. Moreover, the correction of these errors reduced sales and operating profits by $1.3 million and $2.1 million, respectively, in Q1 2015. These errors resulted in identified material weaknesses of in Cubic's internal control over its financial reporting. Now that we are keeping score, Cubic's original financial statements could previously not be relied upon in fiscal years 2015, 2014, 2013, 2012, 2011, 2010, 2009, and 2008.

We bring up Cubic's infamous past to point out what management is capable of doing to reach sales and earnings goals. <u>Each one of the errors detailed above stem from one thing that is put in pretty legal nomenclature, recognizing revenue too early on projects where there are delays, cost overruns, and/or missed milestones</u>. We can track when recognized revenues start to deviate from project timelines based on the firm's costs in excess of billings and vice versa.

Major red flags that brought us to Cubic as a short idea stem from unbilled AR values that have surpassed high watermark metrics in both FY2015 and FY2012, when the company was reprimanded for these grievances. These contract assets represent revenue already recognized on the income statement, but the price/scope not invoiced or agreed upon by the client. Furthermore, where customer advances fell to historical lows in FY2014 of only $85 million, this pales in comparison to the current absolute value of only $46.2 million reported in the latest period, pointing to management pulling revenue from future periods into the current ones to reach estimates.

As you can guess, the SEC again came calling after these errors surmounted again in such a short period of time. On 08/05/15, then CFO received an upload letter from the SEC requesting again information about the materiality of the disclosed errors and how management would remediate their deficiencies in internal control. As any experienced short-seller will tell you when investigating frauds, companies that are capable of errors/restatements in the past are very likely to commit these same indiscretions in the future.

Cubic Management and Board of Directors are Not Qualified to Handle Their Complex Percentage-of-Completion Accounting

GHR favorite shorts arise from small family-run businesses that end up outgrowing their expertise level and eventually succumb to poor internal controls (i.e. both Tutor Perini and Cubic!). Usually, because of the CEO/founders, these companies end up with rampant nepotism throughout the management ranks in addition to weak, insufficient accounting staff lacking much needed separation of duties.

In Cubic’s case, where the company has transformed over the years from an extremely old founder and board (average age of 72 in FY2012) to what it is today, many of the old legacy culture remains and hinders its potential.

Probing into a brief Cubic Corporation history lesson, the firm was founded in 1951 as a small electronics company operating in San Diego by Walter J. Zable in San Diego. Mr. Zable amazingly stayed on as CEO of Cubic until 2012, when he passed away at the age of 97. At this time, the Board of Directors was comprised of:

- Walter J. Zable (97), Chairman of the Board and CEO,
- His son Walter C. Zable (65), who would go on to be Chairman and CEO,
- William W. Boyle (77), his long-standing CFO since 1983,

- Bruce Blakley (66), the only CPA on the Board and head of the Audit Committee,
- Edwin Guiles (62),
- Robert Sullivan (67),
- and John Warner (70)

Since then, many changes have been made, but based on the current amount of accounting red flags, we wonder if the prior freewheeling culture Mr. Zable promoted in the past remains. For example, Bradley Feldmann was named CEO in July 2014 taking over the reins from Walter J. Zable (although he remained Chairman of the Board through 2018). Furthermore, the company went through three CFOs as the company dealt with the errors/restatements throughout the 2010s:

- William W. Boyle (served from 1983 to 2013)
- John D. Thomas (2013 through 2017)
- and now Anshooman Aga (2017 to present)

Curiously, not one of these officers ever held a CPA designation. We believe a company that has produced such a precarious accounting background such as Cubic would have at least tried to bolster its staff with a CPA as the Chief Financial Officer. Also, when we research Cubic's Audit Committee Chairman and noted "Financial Expert", we find solace in Bruce G. Blakley's background as the Board's only CPA. He is Cubic's longest-standing Board member, dating back to the Walter J. Zable era (Blakley, Guiles, and John Warner all remain from the original seven board members listed above). His accounting background consists of teaching at the University of California, San Diego as well as working as a managing partner at PWC in the past.

While his background should somewhat pacify our accounting concerns at Cubic, albeit this is only one person on the entire Board and C-Suite, Mr. Blakley was in charge of the audit committee when two separate accounting restatements happened under his tenure! We find it highly dubious that Mr. Blakley kept his Audit Chair position after the first reported accounting errors/restatements, let alone the second time. Due to these aforementioned restatements, we find it hard to believe that we can trust Mr. Blakley as Audit Chairman to sniff out any accounting financial engineering done by management.

The lack of sufficient accounting staff throughout Cubic's C-Suite and Board of Directors would be concerning at any company. However, when factoring in the volatile past of Cubic related to its revenue recognition policies, GHR remains on high alert for future accounting violations based on their past and current earnings quality metrics.

We believe a more seasoned Auditing Committee with relation to accounting experience would have asked Cubic management the tough questions over the past year, such as:

1) Why have contract assets/unbilled receivables spiked by 44% over the last fiscal year? Is this attributable to the company being behind on any milestones on its projects? If so, why was revenue recognized on these projects and recognized in the correct period?

2) Why has contract liabilities/customer advances fallen to their lowest absolute value dating over 10 years? Has management prematurely recognized revenue from these balance sheet account before the sufficient amount of work on the projects has been performed?

3) According to prior earnings call, former CFO John Thomas would disclose "net AR days" and detailed how there was an "improvement to 69 days" in FY2015. Can you explain why management has not disclosed this key metric since and why has it ballooned to over 90 days in such a short period?

4) Cubic has been burning through cash at a heightened rate, especially when factoring in acquisitions. When does the company believe it will sustain a positive free-cash-flow figure?

5) Why has the company been delaying payments to suppliers, especially over the last two fiscal years?

Accounting Red Flags Could Lead to Material Errors/Restatements in FY2020

The bull case regarding Cubic Corp's stock price revolves around the following tenants that we believe the sell-side community has misunderstood:

- Analysts believe that CUB's recent sales growth (both organic and from acquisitions) are sustainable with the potential to grow over 10% annually.
- Analysts believe that a stated organic growth of 5% annually is attainable for the long-term.
- Analysts believe the company will continue to expand EBITDA and EBITDA margins to 10%+.
- Analysts believe that the current COVID-19 impact is transitory and will not impact Cubic in the long-term.

We have gone step-by-step to debunk many of these flawed reasonings for investors and analysts. Based on our analysis, we believe that much of the recent sales growth was attributable to prematurely recognizing revenue. With respects to the company's already diminished cash flow figures, we believe management provided adjusted metrics that fail to take into account the company's delay of payment to suppliers and the factoring of its receivables. When including these items, free-cash-flow would have been abysmal for FY2019 and FY2018.

We believe the spike in contract assets suggest that management is behind on major projects and have not reached milestones as determined by their own project engineers. Furthermore, the rapid and consistent decline in customer advances and bookings suggest an extremely low quality of revenues that will be a material topline headwind going into FY2020. COVID-19 will only accelerate project delays, as many of the cities Cubic performs work in has "shelter-in-place" pronouncements in place. As such, we believe Cubic's stock price will decline precipitously over the next twelve months as these accounting gimmicks reverse and project delays/work stoppages ensue. Furthermore, we highly doubt that the sell-side community fully comprehends the magnitude of accounting headwinds that CUB will face over the next year in addition to the heightened chance of restatements based on our analysis.

For our valuation, we decided to use a hybrid approach using EV-to-EBITDA[14] and FWD P/E[15] metrics to arrive at our fair value. When analyzing the firm's sustainable values, we made adjustments to EBITDA and earnings figures that have been detailed throughout this report. Furthermore, we applied Cubic's historical multiples with its valuation metrics to arrive at our calculated stock price. We then used an amalgamation of these figures to arrive at our estimated fair value for Cubic. As such, we believe a fair share-price for the firm stands currently at $17.80 which represents a 54% downside to the share-price.

In light of our concerns regarding the myriad of accounting red flags laid out herein, GlassHouse finds the current stock price to be highly quixotic. Accordingly, we are initiating coverage on Cubic Corporation (CUB) with a target price of $17.80.

[14] GHR uses a 12x multiple on our sustainable EBITDA of $85.0 million (CUB historical NTM range of 8x-14x).
[15] GHR uses a 14x multiple on our sustainable EPS of $1.40 (CUB historical NTM range of 14x-20x).

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