GlassHouse Research

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Delayed Projects and Liberal Use of PoC Accounting Plague Aerojet Rocketdyne

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

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Initiation of Aerojet Rocketdyne (AJRD) with a Price Target of $14.50

GlassHouse Research focuses on the target company Aerojet Rocketdyne (AJRD), where management has taken significant advantage of its PoC accounting and recognized revenue prematurely in their respective long-term contracts. Furthermore, in order to mask true economic earnings which have faltered in recent periods, we believe management has underfunded some of its key reserves and capitalized recurring expenses.

- **Aerojet's already anemic backlog suffers a material hit due to adoption of ASU 606:**
    - **AJRD's backlog suffered a recent $578 million extraction as the firm needed to recognize sales in prior periods due to the ASU 606**. We believe sell-side analysts have not fully grasped this material headwind to future sales based on their respective models.

- **We believe missed milestones and delays have accelerated in the last two years as unbilled receivables have skyrocketed and advanced payments have plummeted:**
    - **Both total and unbilled receivable diagnostics imply that management has been recognizing revenue prematurely as clients are not being invoiced at historical rates.** While management has the subjectivity regarding when to recognize revenue, they do not have that same subjectivity when invoicing clients or asking them for cash payment. **Based on our experience after analyzing Aerojet's accounting, we believe many projects are behind schedule and have missed milestones.**
    - Conversely, advanced payments from clients have plummeted over that same time period. **This suggests that the company's backlog is of poor quality and is a threat to the persistence of earnings going forward.**

- **Key reserve accounts have been underfunded, artificially enhancing earnings by over $30 million (27% of total operating income) over 2017:**
    - Deep within the footnotes, we find that two key reserve accounts "reserve for overhead rate disallowance" and "contract loss provisions" have been materially underfunded over the last two years. Thus, this action artificially enhanced Aerojet's earnings by millions of dollars.
    - Furthermore, AJRD's expense account has climbed sharply in recent periods suggesting a capitalization of normalized expenses.

- **Premium valuation erroneously based on faux earnings is unwarranted given the material long-term structural issues and near-term accounting risk:** Using a sustainable earnings figure detailed in this report, GHR will show why we believe an approximate 53.0% downside to AJRD's current share price is in its future.

Company Background

Aerojet Rocketdyne Holdings, Inc. (AJRD) designs, develops, manufactures, and offers aerospace and defense products and systems in the United States. The company operates through two segments, Aerospace and Defense, and Real Estate. The Aerospace and Defense segment offers aerospace and defense products and systems for the United States government, including the Department of Defense, NASA, and aerospace and defense prime contractors. This division delivers propulsion systems, such as liquid, solid, air-breathing, and electric propulsion systems for space, defense, civil, and commercial applications; and armament systems for precision tactical and missile defense propulsion, tactical missile propulsion, and hypersonic propulsion systems.

The Real Estate segment engages in the re-zoning, entitlement, sale, and leasing of the company's excess real estate assets. It owns 11,451 acres of land adjacent to the United States Highway 50 between Rancho Cordova and Folsom, California east of Sacramento.

The company was formerly known as GenCorp Inc. and changed its name to Aerojet Rocketdyne Holdings, Inc. in April 2015. Aerojet Rocketdyne Holdings, Inc. was founded in 1915 and is headquartered in El Segundo, California.

Valuation Measures

Market Cap (intraday) [5]	2.31B
Enterprise Value [3]	2.4B
Trailing P/E	N/A
Forward P/E [1]	24.84
PEG Ratio (5 yr expected) [1]	1.46
Price/Sales (ttm)	1.17
Price/Book (mrq)	13.32
Enterprise Value/Revenue [3]	1.22
Enterprise Value/EBITDA [6]	12.26

[1]

[1] From Yahoo Finance as of 07/19/18

Backlog Composition and Organic Growth at Risk Over NTM

When first looking at Aerojet's financials, many would see a breakout quarter for the company with the firm growing the top line by 21.4% YOY. However, digging deeper into the firm's financials, we have found many unsustainable items that we believe the analyst community has missed.

CEO Elieen Drake discussed the firm's sales trends in its 05/01/18 Press Release stating, "Sales of $492 million grew 21% on a reported basis. Excluding the effects of adopting the new revenue recognition guidance, sales growth was 16% in the first quarter, including 14 points of organic growth after adjusting for the Coleman Aerospace acquisition."

Reading further into the recent change in revenue recognition, we find that the firm adopted ASU 606's revenue recognition policy as of 01/01/18. Within this change in accounting policy, we believe there are many items that will impact future revenues and earnings that the sell-side has missed. Below we detail the impacts of this accounting change:

- Aerojet selected the "Modified Retrospective Method" (over the Full Retrospective Method) when adopting ASU 606. The impact will be that new standards and contracts initiated after the effective date (01/01/18), and for contracts that have remaining performance obligations as of that date, the company will enter an adjustment to the opening balance of their retained earnings account. Additionally, under this method the firm will not restate comparative periods of its financial statements.

- While this method is easier for companies to adopt, overall this obfuscates true comparability metrics as there will be no recast revenue and expenses for all prior periods presented in the year of the adoption of the new standard (as in the Full Retrospective Method).

- Furthermore, Aerojet reclassified many of its balance sheet items into "Contract Assets" and "Contract Liabilities" which we discuss later in this report.

- AJRD discontinued the unit-of-delivery revenue recognition method on certain customer contracts and re-measured the performance obligations using the cost-to-cost method. The cumulative favorable impact of the adoption was $37.6 million in earnings that was credited to Stockholders Equity.

- One area where we believe the sell-side has missed is that, effective on 01/01/18, AJRD recognized $578 million of cumulative net sales and correspondingly impacted AJRD's backlog by –$578 million. Therefore, the firm has, in essence, lost $578 million in revenue to prior periods. While the few sell-side analysts who follow this company have adjusted their backlog figures to show this, they *have not* reduced their future sales outlook accordingly.

- For example, the analyst at SunTrust Robinson Humphrey detailed the following regarding AJRD's outlook, "For 2018/2019 we are now modeling revenue /adj EPS / adj EBITDAP of $1.956B / $0.89 / $228.6M and $2.03B / $1.09 / $259.4M, respectively, compared to our prior respective estimates of $1.93B / $0.96 / $ 225.4M and $2.028B / $1.14 / $251.5M. Jefferies also predicted a modest growth of 1% over 2018 regarding revenues.

Backlog Figures Show Anemic Growth Lies Ahead for AJRD:

While the few sell-side analysts who follow AJRD expected single-digit growth the for next two years, our analysis points to a material sales decline. Factors why we believe will cause Aerojet's sales to fall over the next year stem from the following:

1) Our analysis shows that a depleted backlog that even when excluding the ASU 606 impact, the firm's backlog fell 3% sequentially on weak bookings in the period of only $370 million (versus $828.2 million in the previous quarter). When including the impact of ASU 606, which we believe should be accounted for, this caused bookings to be a negative $208.0 million in the period! Again, this means $578 million of future sales the company was expected to recognize on the income statement over the next year is now gone.

2) The firm's 12M book-to-bill ratio has now decreased in six straight YOY periods, signaling a decline in contractual support for future revenues (see Table 1). Currently this ratio stands at 1.14x, down from 1.17x and 1.40x in Q1 2017 and Q1 2016, respectively.

3) When focusing in to AJRD's funded backlog[2] (which is a more telling harbinger of future revenue versus unfunded), we find that this figure has fallen by 27.3% YOY to only $1.6 billion, its lowest value in four years. Relative to total backlog, we find the ratio of 41% also to be nearing historical lows. Even when adding back the $578 million in recognized revenue, we still find that the funded backlog has declined in 9 consecutive YOY periods.

4) The firm's contract liabilities continue to dwindle in absolute terms and relative to total backlog. These contract liabilities serve as a "down payment" for future projects with AJRD. Therefore, as this ratio continues to fall, we would expect to see an inverse correlation with AJRD's cancellation rates with its projects. Here we see that this ratio has fallen in 9 of the last 10 periods. In the most recent period, this ratio (contract liabilities-to-total backlog) has fallen by 111 bps YOY to 4.7%, representing a five-year low and a negative trend in the quality of AJRD's backlog.

5) Lastly, Aerojet's spiking unbilled receivables and depleted deferred revenue balances suggest delays and missed milestones will cause material top line pressure in future quarters (discussed in the next section).

[2] Total backlog includes both funded backlog (unfilled orders for which funding is authorized, appropriated and contractually obligated by the customer) and unfunded backlog (firm orders for which funding has not been appropriated).

Table 1: Bookings and Backlog Analysis

($ in millions)

Period Ended:	Q1 2018	Q4 2017	Q3 2017	Q2 2017	Q1 2017
Backlog[3]	$3,900.0	$4,600.0	$4,300.0	$4,300.0	$4,200.0
3M Sales	$492.0	$528.2	$484.1	$459.6	$405.3
12M Sales	$1,963.9	$1,877.2	$1,881.2	$1860.9	$1,809.7
3M Bookings	$370.0	$828.2	$484.1	$559.6	$105.3
12M Bookings	$2,241.9	$1,977.2	$2,381.2	$2,360.9	$2,109.7
3M Book-to-Bill	0.75	1.57	1.00	1.22	0.26
12M Book-to-Bill	1.14	1.05	1.27	1.27	1.17
YOY Change					
Backlog	-7.1%	2.2%	13.2%	13.2%	7.7%
3M Sales	21.4%	-0.8%	4.4%	12.5%	13.6%
12M Sales	8.5%	6.6%	9.7%	9.9%	3.9%
3M Bookings	251.4%	-32.8%	4.4%	81.5%	-32.9%
12M Bookings	6.3%	-8.5%	-5.3%	-5.3%	-13.6%
3M Book-to-Bill	189.5%	-32.3%	0.0%	61.2%	-40.9%
12M Book-to-Bill	-2.1%	-14.2%	-13.7%	-13.8%	-16.8%

[3] Backlog was negatively affected by $578 million in Q1 2018 due to the aforementioned accounting change.

AJRD's Percentage-of-Completion Accounting Infers Missed Milestones and Delays

When analyzing Aerojet's financials, a key harbinger that accountants/analysts can use in order to portend a future sales shortfall lies within its percentage-of-completion (PoC) accounting. As a result, we find that AJRD's receivables (both billed, but mostly unbilled), inventories, progress payments, and contract liabilities[4] all suggest that the company has been less than forthcoming regarding its future outlook. Therefore, GHR's analysis below will elucidate Aerojet's PoC accounting as we go through salient line items step by step.

> *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*

Taking a look at an excerpt from AJRD's annual report, we highlight the following which pertains to our thesis:

> Recognition of revenue and profit on long-term contracts requires the use of assumptions and estimates related to the total contract value, the total cost at completion, and the measurement of progress towards completion for each performance obligation. ***Due to the nature of the programs, developing the estimated total contract value and total cost at completion for each performance obligation requires the use of significant judgment.***

[4] These accounts have been reclassified as "Contract Assets" and "Contract Liabilities" in Q1 2018 related to ASU 606.

> In the Company's Aerospace and Defense segment, recognition of profit on long-term contracts requires the use of assumptions and estimates related to total contract revenue, the total cost at completion and the measurement of progress towards completion. *Due to the nature of the programs, developing the estimated total contract revenue and cost at completion requires the use of significant judgment. Estimates are continually evaluated as work progresses and are revised as necessary.*
>
> Factors that must be considered in estimating the work to be completed include, but are not limited to: *labor productivity, the nature and technical complexity of the work to be performed, availability and cost volatility of materials, subcontractor and vendor performance, warranty costs, volume assumptions, anticipated labor agreements, inflationary trends, schedule delays, availability of funding from the customer, and the recoverability of costs incurred outside the original contract included in any estimates to complete.* The Company reviews contract performance and cost estimates at least quarterly and more frequently when circumstances significantly change. When a change in estimate is determined to have an impact on contract profit, the Company will record a positive or negative adjustment to the statement of operations. Changes in estimates and assumptions related to the status of certain long-term contracts may have a material effect on the Company's operating results. [AJRD 2017 10K]

Reviewing these statements, we understand 100% that these excerpts are fairly boilerplate for firms that have long-term contracts. However, where AJRD differs from its peers is with respects to its unfavorable trends within its percentage-of-completion accounting. The word "subjectivity" is key in the excerpts above as it allows managers (not auditors) within the firm to determine its own revenues and profits for each period based on their own estimates. Thus, we intend to show in our analysis why we believe managers at AJRD have been overly-optimistic in recognizing recent revenues and profits, all at the expense of future earnings.

AJRD's Changes in Estimates and Assumptions Turn Negative in Q1 2018:

According to Aerojet, the firm evaluates its contract value and cost estimates for performance obligations at least quarterly and more frequently when circumstances significantly change. Based on our accounting analysis below, we believe that AJRD is facing an ominous period regarding its contracts and performance obligations.

Confirming this thesis in Q1, we note that for the first time in two years, AJRD management chose to reduce their estimates for sales, EBIT and EPS by $7.4 million, $7.9 million and

$0.08 per share, respectively. We believe this is just the beginning of unfavorable changes to their financials as the firm will face substantial headwinds stemming from its bloated balance sheet. Aerojet disclosed that the unfavorable adjustment was due to the following in its Q1 2018 10Q footnotes:

> The three months ended March 31, 2018, unfavorable changes in contract estimates were primarily driven by cost growth and performance issues on the Commercial Crew Development program partially offset by improved performance on the Terminal High Altitude Area Defense ("THAAD"), RS-68, and RL-10 programs.
>
> In the Company's Aerospace and Defense segment, the timing of revenue recognition, customer invoicing, and collections produces accounts receivable, contract assets, and contract liabilities on the Company's Consolidated Balance Sheet. The Company invoices in accordance with contract payment terms either based upon a recurring contract payment schedule, or as contract milestones are achieved. Customer invoices, net of reserves, represent an unconditional right of consideration. When revenue is recognized in advance of customer invoicing a contract asset is recorded. Conversely, when customers are invoiced in advance of revenue recognition, a contract liability is recorded. Unpaid customer invoices are reflected as accounts receivable.

As we can see above, the company records unfavorable estimates based on labor productivity, the nature and technical complexity of the work to be performed, availability and cost volatility of materials, subcontractor and vendor performance, etc., *but most importantly schedule and performance delays*. Therefore, through the use of PoC accounting, we can analyze if AJRD is staying ahead of its performance obligations or falling behind, which we find the veracity of the latter to be true. **One significant point GHR needs to convey to the reader when looking at our analysis is that AJRD's problems *do not* stem from collection issues. Instead, their problems revolve around recognizing revenue too early in their respective contracts. The end result will be a significant reversal of sales and earnings in future periods, where this period may just be the tip of the iceberg.**

Unusual Growth in Receivables Poses Significant Risk to Future Earnings:

- Accounts receivable increased 58.0% YOY to $215.5 million at the end of 2017. This was in contrast with the decline of 0.8% in 3M sales (see Table 2). Even when looking at the firm's 12M sales increase of 6.6%, this growth was dwarfed by the over 50% increase in AR.

- As a result, the company's AR-to-3M sales percentage jumped from just 25.6% at the end of 2016 to 40.8% at the end of 2017 (and even more concerning 73.6% in the latest period). For additional context, the firm's ratio stood at 25.6%, 34.8% and 38.4% in 2016, 2015, and 2014, respectively.

- Three-month days-sales-outstanding (DSO)[5] also has trended unfavorably, rising 77.1% YOY to 43 days, representing a rise of 19 days from the prior year. Furthermore, longer-term trends show similar results with 12M DSOs spiking 23.9% to 42 days for the company. **We cannot stress enough that an increase of this magnitude is extremely unusual for a company in this industry based on our experience.**

- Looking into the subcomponents of total AR, we find that the majority of the increase in AR was due to double-digit increases in the more concerning "unbilled" receivables balance, as discussed in the next section.

Table 2: Annual Receivable Trends

($ in millions)

Period Ended (TTM) :	Q1 2018	2017	2016	2015
Total Accounts Receivable[6]	$361.9	$215.5	$136.4	$169.5
AR-to-Revenue	18.4%	11.5%	7.7%	9.9%
DSO	54	43	24	33
YOY				
Total Accounts Receivable	79.0%	58.0%	-19.5%	-0.6%
AR-to-Revenue (bps)	725	374	(218)	(72)
DSO	41.6%	23.9%	-13.1%	-14.1%

[5] Three-month days sales outstanding (3M DSO) = Average total AR QOQ / 3M Sales * 91.25

[6] Q1 2018 Receivables estimated with adding back contract assets and removing estimated inventory at 03/31/18.

Net Unbilled Receivables Spike 91.8% YOY in 2017:

Digging deeper into AJRD's receivables balance, we find that the greater part of the increase was due to a spike in unbilled receivables. Overall, we view the significant increase in unbilled receivables relative to revenues as a risk to the persistence of earnings, as management uses estimates/subjectivity to determine revenues recognized within the period. Moreover, clients that have not yet been invoiced for work/scope may dispute or have claims regarding the long-term contract with Aerojet. **Thus, the amounts that may end up being disputed by clients have already been recorded as revenue by AJRD, but may or may not be accepted and paid by the client.**

- Net unbilled receivables (unbilleds) have now increased in six consecutive YOY periods and have reached their highest value in any period going back over five years. Specifically, net unbilled receivables have increased 91.8% to $152.7 million at the end of 2017. As of 12/31/17, unbilleds now accounted for 70.9% of total receivables, again another five-year high for the firm.

- Relative to sales, the trend even looks worse for AJRD. Here, we calculate that net unbilleds-to-3M sales have increased 1,395 bps to 28.9% at the end of 2017, or almost double the 2016 value of 15.0% (see Chart 1). Long-term figures also exhibit a parallel trend growing by 362 bps to 8.1% of 12M sales.

- Thus, from these ratios, we can estimate[7] that due to management's subjectivity regarding its revenue recognition, $67.9 million of revenues were recognized in 2017 from spikes in net unbilled receivables. **Although, this type of financial engineering can provide short-term boosts to revenues and earnings, these type of accounting tactics ALWAYS reverse badly for companies that employ these shenanigans.**

- Exacerbating AJRD's revenue recognition issue, GHR also analyzed the firm's "Reserve for Overhead Rate Disallowance", which serves as a contra-asset to the unbilled receivables located deep within the footnotes. Herein, we found that AJRD's reserve for this account has fallen off a cliff relative to unbilled receivables. Relative to gross unbilled receivables, we calculate that the reserve fell 1,397 bps YOY to only 21.9% at the end of 2017. This is down from the 35.9% value reported at the end of 2016. And as a reference point, this ratio has not stood this low since Q3 2014.

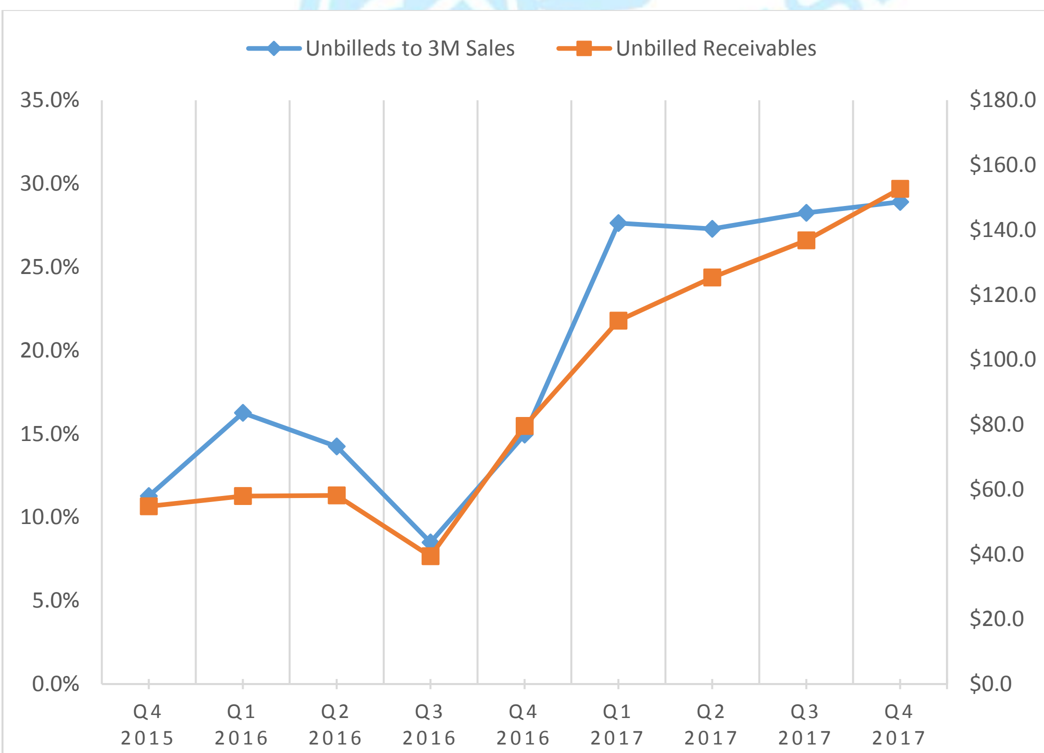
[7] This uses the prior year's baseline of 4.5% unbilled-to-12M sales ratio in our calculation.

- If we calculate our own reserve value using last year's 35.9% as our baseline, we calculate that the true reserve balance should stand at $70.1 million, or a $27.3 million difference. **Thus, by not accurately accruing for its overhead rate disallowance, AJRD was able to aid EPS by $0.28 in 2017, or 38% of non-GAAP EPS!**

- We find the deteriorating reserve at a time when DSOs and unbilleds are dramatically rising to be highly irregular as we would expect the inverse to be true at Aerojet. With the heightened subjectivity revolved around Aerojet's revenue recognition and adjoining reserve, we cannot see conceptually why management would choose to decrease the reserve relative to receivables if not to conceal deteriorating financials, although we will leave the judgement up to the reader.

Chart 1: Unbilled Receivables Trends

($ in millions)



Management's Explanation for Growth in Net Contract Assets Conceal Magnitude of Accounting Issues:

According to management representations and disclosures, the recent $95.4 million consumption of cash in Q1 2018 was attributable to 1) and increase of $76.2 million in AR due to the timing of net sales, 2) $51.2 million of net cash used on contract assets/liabilities primarily due to a decrease in cash advances on long-term contracts and 3) an increase of $17.4 million in other current assets primarily related to increases in prepaid expenses and cost-share receivables (partially offset by tax items). While this statement is fairly boilerplate for the liquidity section of the Q1 2018 10Q, every item discussed in the last excerpt is a threat to AJRD's persistence of earnings, just worded nicely.

Delving first into the contract asset issues, here is where we believe AJRD will suffer the most in the future periods. Also stated in the firm's filings:

> The three months ended March 31, 2018, unfavorable changes in contract estimates were primarily driven by cost growth and performance issues on the [NASA] Commercial Crew Development program partially offset by improved performance on the Terminal High Altitude Area Defense ("THAAD"), RS-68, and RL-10 programs.

While it appears that the delays and performance issues were relegated to only Aerojet's Commercial Crew program, we find it highly peculiar that this was the first time performance issues were disclosed within that program; as well as taking an unfavorable adjustment for the first time in two years. This is because based on net current asset trends, we believe these issues have been prevalent at Aerojet and not just siloed within the Commercial Crew program in only the latest period.

The concurrent rise of unbilled receivables and fall of billings in excess of costs over the last two years suggest to GHR that Aerojet has not been reaching its milestones regarding the projects they have been working on. Otherwise, their respective client would be invoiced (billed) or pay their bill. This would then show up on Aerojet's balance sheet as a debit to cash and a credit to AR, thus bringing their receivable metrics to within historical norms. This has obviously not happened at AJRD, in fact the opposite has occurred drawing our scrutiny of their future revenues. Thus, the further net current assets trend positively, we can ascertain that the respective projects Aerojet are working on will continue to have performance issues.

We also believe that management has been less than forthcoming with these milestone issues as the balance sheet continues to bloat. While management does not give guidance nor have quarterly conference calls, on its Investor Day on 05/08/18, the Commercial Crew program issues were not discussed, nor any issues regarding their decreased free-cash-flow in Q1 2018 (AJRD burned through $99.5 million in FCF while only spending $4.1 million in CapEx in Q1 2018).

GHR cautions that the delays encountered with the Commercial Crew project (and suspected others) exacerbated our concerns regarding the rise in unbilled AR and decline in deferred revenues. Such delays can foreshadow increased costs and lower profits, as well as a higher risk of disputed billings. And with the firm already reducing its estimates for the first time in two years in Q1 2018, this may be an adverse harbinger of things to come in 2018.

Change in Accounting Classification Obfuscates True Balance Sheet Line-Items:

At the start of 2018, AJRD adopted new revenue recognition guidance (related to ASC 606), where the company made certain reclassifications to its balance sheet to conform to the new guidance. As a result, the firm reclassified $151 million of net unbilled receivables and $117.1 million of inventories into a new line-item called "Contract Assets". However, now obfuscating AJRD's financials, unbilled receivables will now no longer be separated out from inventories in the footnotes. For completeness, we note that billed AR would still be held as a separate line item on the balance sheet.

Another new line-item added to the balance sheet is the inverse "Contract Liabilities", which is made up primarily of AJRD's old "advanced payments" and "contract related liabilities" line-items. The firm's billings in excess of cost and estimating earnings (AKA advanced payments) represent advances from customers, which may exceed costs incurred on certain contracts. This payment is important because just like a down payment on a house, this payment locks in the client for future revenues depending on the size.

Below we can see from our analysis, that in the first period of 2018 many of our aforementioned concerns continued to deteriorate at the company. In fact, we believe over the next three periods, AJRD will continue to have substantial negative estimates to earnings as they work through many of their delays and missed milestones.

- When analyzing AJRD's contract assets (CA), we find that this line item (made up mostly of unbilled receivables and inventories) has increased in six consecutive YOY periods by an average of 26.3% YOY. Specifically, this account has ballooned to $266.0 million (see Chart 2), although this might not be entirely noticeable to the novice analyst as this is a new line-item on the balance sheet.

- On the other side of the balance sheet, we even find further discord with the firm's dwindling contract liabilities (CL), or advanced payments. Concern regarding quality of revenues comes from a 13.6% YOY (23.2% QOQ) decline in contract liabilities at 03/31/18. This stands in contrast with recognized revenues, which increased by 21.4% YOY in Q1. As a result, CL-to-3M sales plummeted by 1,751 bps YOY (919 bps QOQ) to only 43.2%, representing a five-year low for the company.

- Finally, when analyzing net contract assets (NCA), which is calculated as CA – CL, we calculate that NCAs turned positive (an unfavorable trend) in Q1 to $53.4 million. Ceteris peribus, a company that has negative NCAs (or a positive current liability balance) suggests its persistence of future revenues and earnings remain strong. Also, these companies will have strong free-cash-flow generation. Here, with AJRD we find the opposite to be true.

- At the end of Q4 2015, we calculate that AJRD reported a net contract asset balance of –$81.0 million. However, since this time we find these balance sheet items to be trending unfavorably over time to reach its current balance of +$53.4 million (see Chart 2).

- Relative to sales, we find the situation to be more ominous at the company. To illustrate this, we calculate NCA-to-3M sales increased by 996 bps to 10.9%, representing the highest ratio reported in the last five-years (an unfavorable trend).

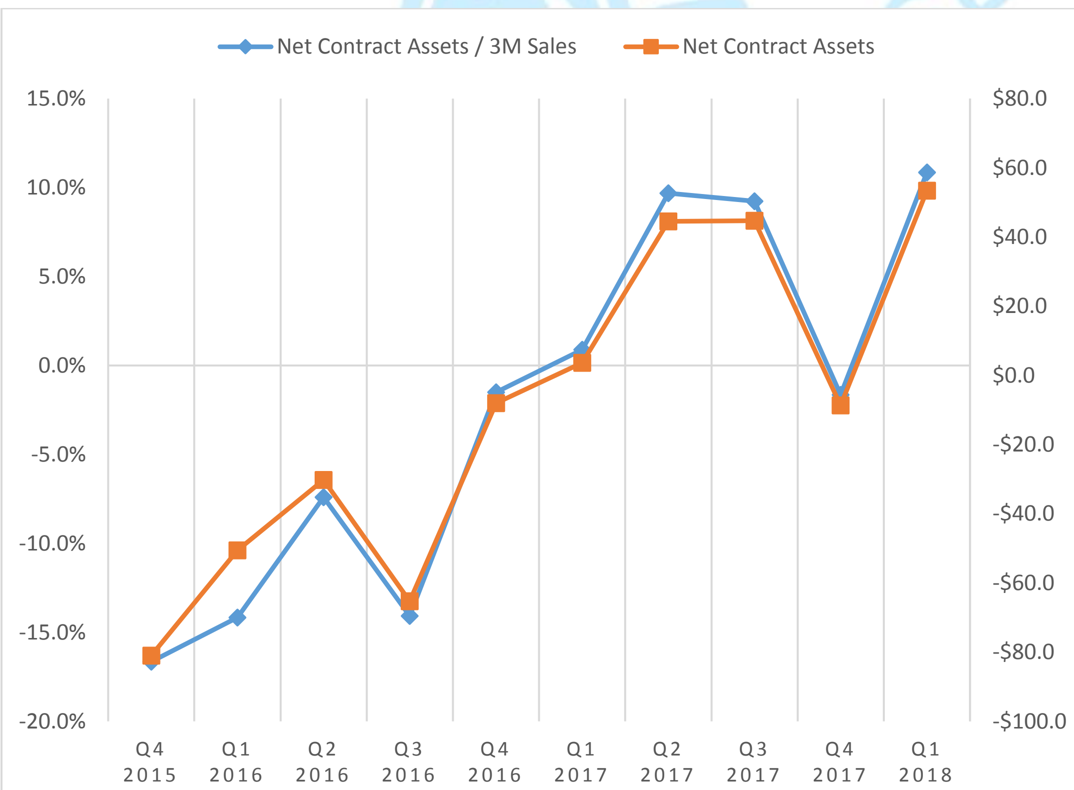
- Finally, deep within the footnotes, GHR finds that AJRD has consistently been drawing down its "Contract Loss Provision", which is a sub-component of Other Current Liabilities. Analyzing this data dating back to 2014, we find this provision had a robust value of $15.0 million. Since this time, AJRD managers have been drawing down this reserve account to a five-year low of $3.8 million as of 12/31/17.

- Relative to advanced payments, we find that this ratio also hit a five-year low of 1.6%, again substantially down from the 12.3% percentage reached in 2014. To elucidate on the subject conceptually, this provision is needed to reserve against losses in contracts related to advanced payments. Therefore, with contract liabilities taking a tumble over the last two years, we would expect this provision to increase, not to materially decline as it has.

- Its overall decline is a transitory reduction of expenses on the income statement that we view as unsustainable. Our own calculations, using the prior year's provision-to-advanced payments ratio of 3.1% as a baseline suggest the firm reduced its expenses by $3.5 million in 2017. Or in other words, management artificially inflated its EPS by $0.04 (5.0% of non-GAAP EPS) over 2017 just by using this accounting gimmick!

Chart 2: Net Contract Assets Trends

($ in millions)



Unusual Growth in Prepaid Expenses Insinuate Future Margin Compression

In general, we view growth of prepaid expenses and other current assets ahead of revenue and/or total operating expenses as a potential indicator of excess costs stored on the balance sheet (i.e., excess relative to their expected future benefits). Regardless of whether the build-up occurred as a result of deterioration in (macro or micro) economic circumstances or a relatively higher rate of capitalization (slower amortization) than in prior periods, the end result is the same. Absent similar growth in revenues, margins will decline as these costs must ultimately be amortized against earnings.

Capitalizing expenses is the easiest way for CEOs and CFOs to create faux earnings in any given period. Prepaid expenses never get discussed on conference calls as analysts are too busy digesting management's guidance and updating their models.

In our experience, it is the perfect account that no one looks at to manipulate.

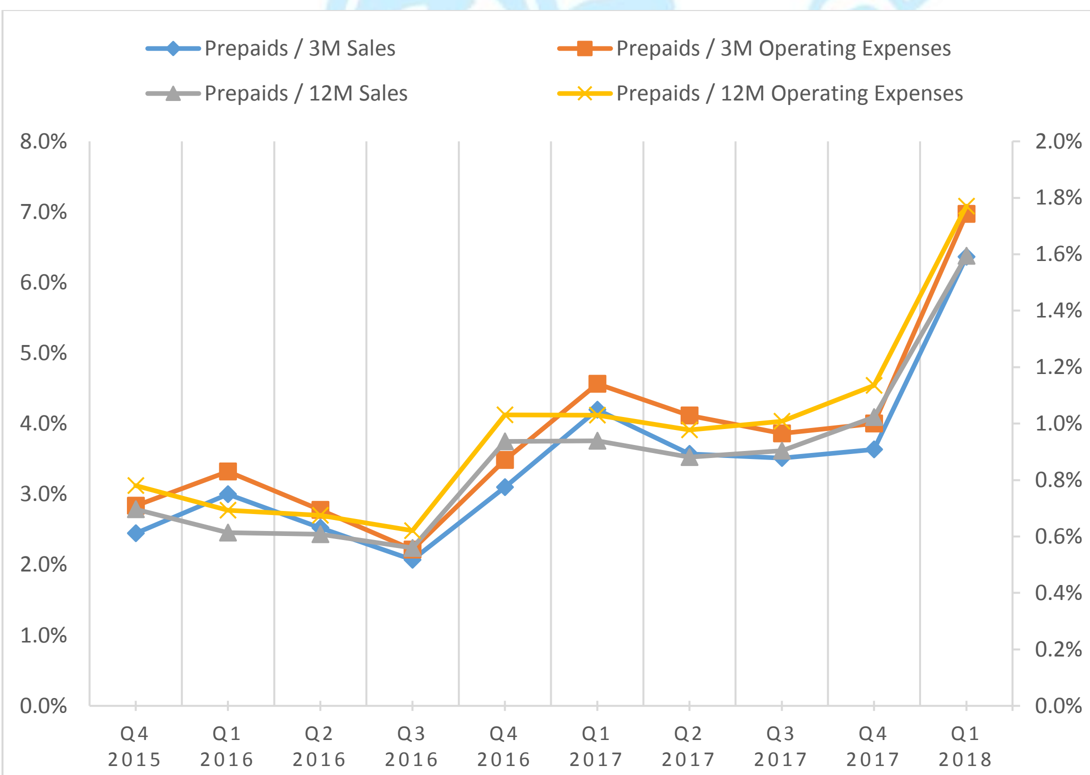
- GHR has observed a consistent rise in prepaid expenses (prepaids) located in the "other current assets" footnotes in AJRD filings. In Q4 2015, the company reported a balance of only $11.9 million, however since then, this balance has increased in a stair-step fashion up to $31.3 million in the latest period (see Chart 3). In Aerojet's footnotes, the firm reported an astonishing 84.1% YOY jump to its current balance with no explanations given in the latest 10Q. An increase of this magnitude with no clarifications we find to be highly peculiar, especially with a blessing from Aerojet's auditor.

- More importantly, prepaids have outpaced both 3M and 12M sales on a YOY basis in seven consecutive periods. As a result of the recent growth in this account, prepaid expenses are up 217 bps (65 bps) YOY to 6.4% (1.6%) relative to 3M sales (12M sales). Both these ratios are at their respective five-year high showing the severity of this unusual increase.

- We find similar results when the level of prepaids is measured against total operating expenses (rather than revenues). For instance, prepaids jumped 74 bps YOY to 1.8% of 12M operating expenses (a five-year high). Again, analyzing shorter-term patterns, prepaids also increased 241 bps YOY to 7.0% (a five-year high), of total three-month operating expenses.

- To quantify the rise in prepaid expenses relative to earnings, we calculate that if Aerojet would have kept the prepaid-to-12M sales ratio constant at its Q1 2017 percentage of 0.9%, the company would have to reduce its EPS by $0.13 over the TTM. This EPS value also equates to 16.0% of TTM non-GAAP EPS.

Chart 3: Relative Prepaid Expense Trends



Subjective Short-Term Performance Incentives Drive Motivation to Manage Earnings:

After analyzing the firm's Proxy Statements, Summary Compensation Table & Performance Goals, we find that AJRD uses a combination of EBITDAP, cash flow from operations and bookings as measures for the Named Executive Officers (NEOs) annual incentive plan. This is what we believe drives a high motivation to manage earnings to the upside. Especially, when the bonuses are based on easily manipulated EBITDAP.

- According to AJRD's 2017 Proxy Statement, CEO Eileen Drake derives approximately 79% of her salary from stock awards, options, and non-equity incentive plan compensation. Thus, a material portion of Ms. Drake's salary depends upon the performance goals given by Aerojet. The same is true for COO Mark Tucker (71.6% of salary is performance driven), and CFO Paul Lundstrom (70.7% of salary is performance driven) who does not appear to be a CPA or has obtained a license in his career.

- We find this telling that a company that must deal with many complex accounting issues in this industry would not have more experienced accounting professionals in key positions. Searching through the firm's proxy, we find that the only CPA in a key position is director James Perry, who is also the head of the Audit Committee. <u>However, overall, we would hope to find more experienced accountants at this company due to the complex nature of percentage-of-completion accounting.</u>

- Below is Aerojet's annual incentive excerpt from its 2017 Proxy:

			Cash Incentive Awards			
Name	**Payout Level**	**Base Salary**	**Award at 100% Target Performance**	**Award at 200% Maximum Performance**	**Actual Performance Achievement Percentage**	**Actual Payout at Achievement Percentage**
Eileen P. Drake	100%	$ 728,000	$ 728,000	$ 1,456,000	167.9%	$ 1,222,312
Mark A. Tucker	65%	454,272	295,277	590,554	167.9%	495,770
Paul R. Lundstrom	65%	442,900	287,885	575,770	167.9%	483,359
John D. Schumacher	55%	351,801	193,490	386,981	167.9%	324,870
Arjun L. Kampani	55%	338,000	185,900	371,800	167.9%	312,126

- As we can see, large percentages of each NEOs pay comes from these short-term incentive goals that focus on EBITDAP, CFOA, and bookings. Zeroing in on

EBITDAP, we see that in 2017, Aerojet's NEOs had a threshold, target, and maximum performance goals of $192.5 million, $213.9 million, and $256.7 million, respectively.

- Actual performance was reported as $232.7 million in EBITDAP for 2017. This eclipsed their target amount of $213.9 million by 8.8% for the year. However, when taking into account many of the easily manipulated reserves such as the unbilled AR overhead rate allowance, contract loss provision, and the unusual rise in prepaid expenses, this figure falls well below its intended target. <u>When accounting for our adjustments, we find that this value plunges to only $187.7 million in 2017.</u> This even falls below the firm's stated threshold value of only $192.5 million. Again, we point out throughout this report how easy it is for managers in these highly subjective accounts to veer them to benefit the company's financials in the short-term (as well as benefits the NEOs bonuses).

Executive Targets (Dollars in Millions)	Threshold Opportunity	Target Opportunity	Maximum Opportunity	Actual Performance	Actual Achievement
Adjusted EBITDAP[1] Ÿ Threshold — $192.5 Ÿ Target — $213.9 Ÿ Maximum — $256.7	15.0%	30.0%	60.0%	$ 232.7	43.2%

- We find a similar situation in FY2016, where managers had incentive EBITDAP goals of $244.9 million (threshold), $272.1 million (target), and $326.5 million (maximum), respectively. Luckily, for Aerojet managers that year, they were just able to be out their target goal with reported EBITDAP of $273.1 million.

- When factoring in the same three accounts discussed above, we find that Aerojet would again miss its target EBITDAP with our calculated amount coming in at $261.6 million.[8] Thus, AJRD's managers would have suffered a material decrease in incentive pay as a result of normalizing these accounts to historical standards.

- Overall, we believe that when a company offers such short-term performance goals, it leads to the cutting of many corners and is counter-intuitive to the long-term health of the firm. Plus, many of these accounts that have deviated from historical norms, will now reverse violently as a headwind to the firm's financials going forward.

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[8] This adjusts for AJRD's unbilled AR overhead rate allowance of –$5.4 million, prepaid expenses of –$4.2 million, and contract loss provision of –$1.9 million.

AJRD's Share Price Premium is Based on Unsustainable Earnings

Based on the aforementioned EPS adjustments, we believe that our changes to Aerojet's EPS figures create a more sustainable form or true economic earnings figure that investors should rely upon. Additionally, we used our adjustments to come to a sustainable EBITDAP figure as well. Below, the reader can see the EPS and EBITDAP adjustments made that were detailed throughout the report.

Table 3: Calculating 2018 Sustainable EPS and EBITDAP

Period Ended 12M:	2018 E
Non-GAAP EPS	$1.05 E
Unbilled AR Reserve Adj.	–$0.28
Prepaid Expense Adj.	–$0.13
Contract Loss Provision Adj.	–$0.04
Sustainable 2018 EPS	**$0.60**
% Difference	**46%**

Period Ended 12M:	2018 E
EBITDAP	$231.3 E
Unbilled AR Reserve Adj.	–$27.3
Prepaid Expense Adj.	–$12.9
Contract Loss Provision Adj.	–$3.5
Sustainable 2018 EBITDAP	**$187.7**
% Difference	**19%**

Again, while the sell-side community continues to value AJRD by the company's stated measure of non-GAAP earnings and "adjusted EBITDAP," we at GHR believes the company's true economic earnings can be better estimated using our sustainable adjustments detailed in our report. We believe these accounting reversals are not well understood by the sell-side and material headwinds to revenues and earnings will be the end result. Basing our valuation on our sustainable forward EPS of $0.60 and EBITDAP of $187.7 million for 2018, we believe a fair share-price for the firm stands currently at $14.50, which represents a 53% downside to the current share-price.

In light of our concerns regarding a bloated balance sheet that has spiking unbilled receivables and prepaid expenses, diminishing advanced payments, and vastly underfunded reserves, GHR finds the current stock price to be highly egregious. Furthermore, we see added risk regarding the company's depleted backlog and organic growth figures. Accordingly, we are initiating coverage on Aerojet Rocketdyne, Inc., with a target price of $14.50.

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