BTN Research

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Johnson & Johnson (JNJ) EQ Review

Current EQ Rating*	Previous EQ Rating
4-	na

6- "Exceptionally Strong"
5- "Strong"
4- "Acceptable"
3- "Minor Concern"
2- "Weak"
1- "Strong Concerns"

Note that a "+" sign indicates the earnings quality improved in the most recent quarter while a "–" sign indicates deterioration

*For a more detailed explanation of the EQ Review Rating scale, please refer to the end of this report

We are initiating earnings quality coverage of JNJ with a 4- (Acceptable) rating.

While we do see some red flags and one time-benefits in JNJ's earnings, we are choosing to initially rate JNJ a 4- (Acceptable) due to its cash flow generation. As far back as the *Tylenol* tampering fiasco in the 80s, JNJ has experienced more than its fair share of missteps leading to conflicts with plaintiffs' attorneys. However, through it all, the company has

managed to generate enormous amounts of cash that have enabled it to weather the storms. The dividend consumes about 50% of free cash flow. We do note that the buyback more than consumes the extra free cash flow at the current accelerated pace and the resulting 2%+ share reduction is a key supplement to EPS growth. However, with net debt to EBITDA less than 1x this is not a pressing issue.

A recent $4 billion litigation charge related to opioid litigation and a flood of negative headlines surrounding alleged carcinogenic baby powder are reminders of the likelihood of future payments related to lawsuits. Assessing the size and probability of future payments is beyond the scope of this review, but the $17 billion in cash on the balance sheet and the low debt level seem like solid preparation for foreseeable negative outcomes.

We note the following observations regarding the company's accounting:

- The allowance for doubtful accounts has been declining for several quarters, falling to 1.5% in the 9/19 quarter versus 2% a year ago. We estimate it would take about 2.2 cps in charges to bring the reserve back to last year's level.

- An obvious trend in the company's balance sheet is the disproportionate growth in allowance for rebates, returns, and promotions relative to sales. This is traceable to huge growth it the pharmaceutical segment allowance for rebates. These rebates represent incentives paid to pharmacy benefits managers to include the company's drugs on their formularies and are recorded as a reduction in sales. They are an integral and complex part of the overall pricing structure in the pharma industry. Therefore, we do not view the movement in these accounts as indicative of more conservative accounting, but rather a symptom of pricing concessions for some of its higher-priced drugs which the company has prominently discussed in recent quarters.

- JNJ's pension expense has been declining for the first nine months of 2019 with the decline adding almost 3 cps in the 9/19 quarter. This has largely been the result of lower recognition of actuarial losses likely driven by an increase in the discount rate used to calculate the PBO. In addition, we are puzzled by the decline in service cost given the presumably lower discount rate used in their calculation. The company has made no mention of a change to the benefit formula. Regardless, this seems unsustainable going forward in a low rate environment.

- Like most pharmaceutical companies, JNJ excludes the amortization of intangibles from its non-GAAP earnings figures. In our mind, this practice overstates the adjusted results as it fails to recognize that the company would have incurred research and development expenses if it had developed the acquired products itself. For perspective, the company's non-GAAP EPS figure of $2.12 in the 9/19 quarter had $0.38 worth of intangibles amortization added back to it representing a 22% boost.

- JNJ incurs regular restructuring payments with quarterly cash payments ranging from 1.5% to almost 5% of adjusted operating income. Our main concern regards the makeup of the charges as virtually all of the charges and cash payments for the first nine months of 2019 was labeled as "other" rather than severance or asset write-offs. The company describes the other category as including "project expense such as salaries for employees supporting the initiative and consulting expenses." Such a large portion of payments assigned to a category including employee time is always a concern as it requires management to estimate how much of its time was spent dealing with the restructuring versus day-to-day activity. This increases the chance of operating expenses being included in the charges and essentially written off in the non-GAAP adjustments.

- The company does not always exclude material gains from its non-GAAP adjustments. Case in point, JNJ realized a $2 billion gain from the divestiture of its ASP business in the 6/19 quarter. However, this amount was not adjusted out of the non-GAAP numbers. While the company included the gain in its outlook for Other (Income)/Expense for 2019 and called it out in the conference call, the failure to remove it led to a reported 23% increase in non-GAAP earnings. However, we estimate non-GAAP operating income actually declined by about 2% in that quarter. This makes the company's non-GAAP numbers unreliable as a gauge of true operational growth.

Allowance for Doubtful Accounts Declining

Despite the increase in accounts receivable, the allowance for doubtful accounts has actually been declining both year-over-year and sequentially. This has led to a noteworthy decline in the allowance percentage as seen below:

	9/29/2019	6/30/2019	3/31/2019	12/30/2018
Gross Receivables	$15,028	$14,904	$14,359	$14,346
Allowance for Doubtful Accounts	$227	$251	$244	$248
% of Gross Receivables	1.5%	1.7%	1.7%	1.7%

	9/30/2018	7/01/2018	4/01/2018	12/31/2017
Gross Receivables	$14,329	$14,380	$14,447	$13,781
Allowance for Doubtful Accounts	$281	$269	$281	$291
% of Gross Receivables	2.0%	1.9%	1.9%	2.1%

We estimate that just the sequential decline in the allowance percentage added a penny per share to earnings in the quarter. When viewed over the longer-term, it would take about 2.2 cps in charges to bring the allowance back to the 2% level.

Rebates Are Increasing Relative to Sales

JNJ makes provisions for rebates, sales incentives, trade promotions, coupons, returns and discounts which are accounted for as a reduction to sales and recorded in the "Accrued Rebates, Returns, and Promotions" account on the balance sheet. The following table shows the balance of the account as a percentage of trailing 12-month sales for the last eight quarters:

	9/29/2019	6/30/2019	3/31/2019	12/30/2018
Sales	$20,729	$20,562	$20,021	$20,394
Accrued Rebates, Returns and Promotions	$10,977	$10,433	$9,523	$9,380
% of T12 Sales	13.4%	12.8%	11.7%	11.5%

	9/30/2018	7/01/2018	4/01/2018	12/31/2017
Sales	$20,348	$20,830	$20,009	$20,195
Accrued Rebates, Returns and Promotions	$8,684	$8,717	$7,956	$7,210
% of T12 Sales	10.7%	10.8%	10.1%	9.4%

The table shows a sharp increase in the allowance relative to sales. While the company does not disclose the quarterly development of the allowances, it does provide detail by segment in its 10-K. The ending balances of the respective accruals for each segment are shown below:

	2018	2017	2016
Consumer Segment			
Rebates	$271	$186	$136
Returns	$57	$68	$65
Promotions	$497	$481	$358
Pharmaceutical Segment			
Rebates	$7,510	$4,862	$3,420
Returns	$436	$362	$334
Promotions	$13	$35	$0
Medical Device Segment			
Rebates	$1,218	$1,620	$1,500
Returns	$114	$152	$127
Promotions	$42	$83	$32

We can see that by far the largest component of the "Accrued Rebates, Returns, and Promotions" account is comprised of Pharmaceutical segment rebate provisions followed by Medical Device segment rebate provisions. Also, the source of the increase in the account is traceable to the increase in rebate provisions from the pharmaceutical segment which has more than doubled in the last two years. This is not surprising given that rebates are a major component of the complex pricing mechanism in the pharmaceutical industry. These payments essentially represent amounts paid to pharmacy benefits managers (PBMs) based on sales of the company's drugs which incentivize the PBM to include the company's drugs on the PBM's formularies (approved list of drugs). An increase in these rebates essentially represents a price cut that results in lower realized net revenue. JNJ has made multiple references to higher rebates, (particularly related to some of its higher-priced drugs) negatively impacting sales growth in recent quarters.

The same mechanism holds true with Medical Device rebates. Medical device rebates have not received much focus and frankly, we are not certain of the reason for the decline in the associated rebate provision. This is an area to focus on when the 2019 10-K comes out.

With consumer companies, we view significant changes in provision for rebates and promotions relative to sales as a concern as contract terms are generally not subject to rapid

change so movements can indicate a company is becoming more aggressive in its estimates of how much it will eventually have to pay to customers. However, in the medical industry, this is more closely related to pricing action so we are less inclined to view the increase in pharmaceutical rebates provisions as more conservative accounting and more inclined to see it as the byproduct of pricing pressure in that product area.

Pension Expense Declining

JNJ has enjoyed a decline in pension and postretirement benefits expense for the last three quarters. In the 9/19 quarter, we estimate the decline in pension costs added almost 3 cps to earnings growth. While this is a relatively small amount of total earnings, it did represent well over a quarter of the reported growth in non-GAAP EPS in the period.

To evaluate the sustainability of this tailwind, we must look at the components of pension cost and what is driving each one. The following table shows the component of pension cost for the company's retirement and other benefit plans:

	9/29/2019	6/30/2019	3/31/2019	12/30/2018
Service Cost	$343	$346	$344	$425
Interest Cost	$319	$320	$321	$284
Expected Return on Plan Assets	-$580	-$582	-$585	-$550
Amortization of Prior Service Costs/(Credits)	-$6	-$7	-$7	-$7
Recognized Actuarial Losses	$177	$179	$176	$242
Settlement Losses	-$4	$8	-$1	$3
Total Pension/Postemployment Benefit Expense	$249	$264	$248	$397

	9/30/2018	7/01/2018	4/01/2018	12/31/2017
Service Cost	$374	$377	$376	$370
Interest Cost	$284	$287	$289	$274
Expected Return on Plan Assets	-$551	-$556	-$562	-$514
Amortization of Prior Service Costs/(Credits)	-$6	-$8	-$7	-$7
Recognized Actuarial Losses	$244	$244	$245	$188
Settlement Losses	$0	$0	-$2	$16
Total Pension/Postemployment Benefit Expense	$345	$344	$339	$327

The detail reveals that the decline is due to a combination of lower recognized actuarial loss followed by an increase in the expected return on plan assets and a decline in service cost.

To examine the forces behind the move in pension expense, we must examine the funded status of the plan and the assumptions used in the calculation of pension costs. This information is only available annually. The following table shows the funded status for the company's retirement plans and its other benefit plans:

	12/30/2018	12/31/2017	01/01/2017
Retirement Plans			
Benefit Obligation	$31,670	$33,221	$28,116
Fair Value of Plan Assets	$26,818	$28,404	$23,633
Retirement Plans Funded/(Unfunded) Status	-$4,852	-$4,817	-$4,483
Other Benefit Plans			
Benefit Obligation	$4,480	$4,582	$4,605
Fair Value of Plan Assets	$180	$281	$75
Other Benefit Plans Funded/(Unfunded) Status	-$4,300	-$4,301	-$4,530
Total			
Total Benefit Obligation	$36,150	$37,803	$32,721
Total Fair Value of Plan Assets	$26,998	$28,685	$23,708
Funded Status	-$9,152	-$9,118	-$9,013

The key assumptions used in the calculation of both the benefit obligation and the periodic pension expense are shown in the following table:

	12/30/2018	12/31/2017	01/01/2017
Benefit Obligations Assumptions			
Retirement Plans			
Discount Rate	3.76%	3.30%	3.78%
Rate of Compensation Increase	3.97%	3.99%	4.02%
Other Benefit Plans			
Discount Rate	4.40%	3.78%	4.42%
Rate of Compensation Increase	4.29%	4.30%	4.29%
Net Benefit Cost Assumptions			
Retirement Plans			
Service Cost Discount Rate	3.20%	3.59%	3.98%
Interest Cost Discount Rate	3.60%	3.98%	4.42%
Rate of Increase in Compensation Levels	3.98%	4.01%	4.02%
Expected Long-Term Rate of Return on Plan Assets	8.46%	8.43%	8.55%
Other Benefit Plans			
Service Cost Discount Rate	3.85%	4.63%	4.77%
Interest Cost Discount Rate	3.62%	3.94%	4.10%
Rate of Increase in Compensation Levels	4.29%	4.31%	4.32%

Key points to take away:

- Plan obligations fell in 2018 due to actuarial gains, the bulk of which is most likely due to the increase in the discount rate used to calculate the PBO.

- However, the company also experienced a negative return on plan assets which drove down the value of assets and resulted in the overall funded status remaining flat with 2017.

- The discount rate used to calculate service cost declined which has an upward impact on service cost as the present value of future benefits earned from current service are discounted at a lower rate. The company did, in fact, experience an almost 20% increase in service cost in 2018. We have seen no mention of the company changing its formula for future benefits so we are somewhat puzzled by the decline in service costs seen in the first nine months of the year and do not view that as sustainable in a lower rate environment absent changes to the pension formula.

- The company's expected return on plan assets of 8.46% was essentially flat in 2018. We note that while this is a relatively high assumed rate of return, the company's plans are roughly 70% invested in equity investments which makes it a little more reasonable. The increase in the expected return on plan assets the company has enjoyed so far in 2019 is likely due to rising asset balances driven by the market rebound.

- The largest component of the decline in pension expense in the first three quarters of 2019 is a lower amortization of actuarial losses which is likely being driven by the higher discount rate used in calculating the PBO. We would expect this to wane and even reverse in future quarters as the discount rate used in the calculation ultimately declines.

Restructuring Charges

In 2016, the company announced a restructuring program for its Medical Device segment to "strengthen its go-to-market model, accelerate the pace of innovation, further prioritize key platforms and geographies, and streamline operations while maintaining high-quality

standards." Total charges under this plan amounted to $2.5 billion and it was substantially completed by the end of 2018.

In 2018, the company announced its Global Supply Chain initiative to "focus resources and increase investments in the critical capabilities, technologies, and solutions necessary to manufacture and supply its product portfolio, enhance agility and drive growth." The company anticipates spending approximately $1.9 billion to $2.3 billion for the plan which will run through 2022.

Over the last three years, cash restructuring payments have ranged from 1.5% to almost 5% of adjusted operating income. While this is not as egregious as some never-ending restructuring plans we see at some companies in terms of size, what catches our eye about the plan is the large percentage of the charge that is allocated to the "other" category. For the first nine months of 2019, the company took charges of $360 million and made cash payments of $316 million. Of those amounts, $279 million of the charges and $302 million of the payments were allocated to the "other" category with only $81 million of the charges assigned to asset-write-offs and only $14 million in cash payments assigned to severance. The footnotes explain that other "include project expenses such as salaries for employees supporting the initiative and consulting expenses." We are always concerned when we see large amounts of cash payments assigned to categories including employee expenses as management is essentially guessing as to how much of its time is being spent on the restructuring versus performing its regular duties. This increases the likelihood that expenses that should be viewed as operating are being included in the restructuring charges and getting added back to adjusted operating results.

Excluding Intangible Amortization

Like most pharmaceutical companies, JNJ excludes the amortization of intangibles from its non-GAAP earnings figures. In our mind, this practice overstates the adjusted results as it fails to recognize that the company would have incurred research and development expenses if it had developed the acquired products itself. For perspective, the company's non-GAAP EPS figure of $2.12 in the 9/19 quarter had $0.38 worth of intangibles amortization added back to it, representing a 22% boost.

Keep an Eye on Other Income/(Expense) vs. Non-GAAP

JNJ's "Other (Income)/Expense" line item on its income statement is a catch-all which regularly includes very material amounts. The company describes the account as follows:

> *"Other (income) expense, net is the account where the Company records gains and losses related to the sale and write-down of certain investments in equity securities held by Johnson & Johnson Innovation - JJDC, Inc. (JJDC), unrealized gains and losses on investments, gains and losses on divestitures, certain transactional currency gains and losses, acquisition-related costs, litigation accruals and settlements, as well as royalty income."*

The 9/19 quarter Other (Income)/Expense was an expense of $4.2 billion comprised mostly of a $4 billion settlement related to opioid litigation. Restructuring charges, litigation expenses, and unrealized gains/losses on securities are common constituents in the account. Most of these amounts are adjusted out of the company's non-GAAP earnings figures. However, occasionally material components don't wind up in the adjustments. For example, in the 6/19 quarter, the company recognized a $2 billion gain from the divestiture of its ASP business. However, this was not adjusted out of non-GAAP earnings, resulting in a reported increase of 23% for non-GAAP EPS in the 6/19 quarter on a 1.6% increase in non-GAAP sales. We estimate non-GAAP operating income actually declined by about 2% in the quarter. The company does give guidance for Other (Income)/Expense for the full year and highlighted the gain in the conference call. Still, we find it strange that the company did not elect to remove it from its non-GAAP earnings and the failure to do so seems to defeat the purpose of preparing the figure in the first place.

Grubhub (GRUB) EQ Review

Current EQ Rating*	Previous EQ Rating
3-	na

6- "Exceptionally Strong"
5- "Strong"
4- "Acceptable"
3- "Minor Concern"
2- "Weak"
1- "Strong Concerns"

Note that a "+" sign indicates the earnings quality improved in the most recent quarter while a "–" sign indicates deterioration

*For a more detailed explanation of the EQ Review Rating scale, please refer to the end of this report

We are initiating earnings quality coverage of GRUB with a 3- (Minor Concern) rating.

Grubhub provides online ordering systems for individual diners to access restaurant pick-up and delivery take-out food. This has become a battleground stock where the company has missed forecasts in several recent quarters. The short interest is over 25% of the float and the stock has become very volatile falling over 40% since the summer and recently rallied back 10 points after a disappointing 3Q19. Our focus is on the accounting quality and we believe that GRUB has several risks of additional problems as it seeks to rebuild its operating model from a focus on heavy acquisitions to one of boosting internal investing.

The company's liquidity looks solid with $426 million in cash against $493 million in financed debt. Also, it continues to add customers. For those reasons, we have this as a 3 rating. However, we see several potential hits to cash flow beyond what the company is guiding toward based on higher advertising, larger investments in delivery, and incentives for users – thus the minus rating as we believe this situation could get worse. Finally, we believe investors will see that profitability is significantly lower if GRUB is now going to focus more on building and retaining business with its internal sales staff and R&D people rather than acquiring them. Internal growth has 100% expensing, while GRUB is only amortizing about 20% of the purchase price of acquired assets over longer time-frames.

- GRUB laid out plans to boost marketing and incentives to increase the number of diners using its app and restaurants on the platform. Advertising was already rising faster than sales and now that will accelerate more and become a $60 million headwind.

- The company indicated that the early innings for its industry growth are over and the incremental customer additions may order less, use competitors too, and require more discounts. This may be the new normal of heavy investment and GRUB took down forecasts considerably for EBITDA.

- If competition for restaurants is increasing, we can see the payables account to restaurants being squeezed. Historically, this has provided cash flow to GRUB and stands about 11 days of sales. If this is competed away via faster remittances to restaurants, GRUB could lose nearly $100 million in cash in our view.

- Commission percentages are rising, yet GRUB sees more pricing competition too. We think this is a risk for EPS and cash flow too.

- GRUB pays a high percentage of wages with non-cash stock compensation. It adds this back to its Adjusted EBITDA and non-GAAP EPS figures too. Looking at the stock price in the low $40s and the exercise prices on recently granted RSUs and options in the $70s-$90s, we wonder if employees will demand higher cash wages too. There may be $20-$30 million at risk here or about $0.17-$0.26 in non-GAAP EPS.

- Capital spending looks to be in good shape and is covered by free cash flow. The only risk we see is a confluence of several cash issues related to the possibility of paying restaurants their cash faster, the higher marketing, and employees wanting more cash potentially pushing free cash flow into negative territory.

- GRUB spent over $960 million on acquisitions since 2016. If these had been built in house, they would have been expensed and would have exceeded adjusted EBITDA.

- There is a risk of a goodwill impairment. Clearly, the business model has changed with lower ROI via higher costs to retain customers and grow and price-sensitive customers pressuring fees. Also, the stock price's decline should lead to tougher tests on goodwill values at the end of this year.

- We believe earnings are inflated due to non-amortization of goodwill and using longer amortization schedules for other acquired assets vs. those built in house. In particular, we noticed that GRUB is amortizing restaurant relationships over 17.5 years. A high percentage of restaurants do not last 5 years. Plus, other assets at GRUB are being amortized over 1-3 years.

- If we adjust non-GAAP EPS simply for employees wanting $30 million in higher cash wages (vs. $73 million in stock compensation for 2019), and amortization of non-goodwill intangibles that were acquired with cash – it almost cuts the profit margins at GRUB in half. That still doesn't include speeding up amortization, pressure on pricing or the coming surge in marketing investment. We think this demonstrates that as GRUB grows more internally and less via acquisition – profitability could drop as it expenses many costs it currently adds back as non-cash items.

Marketing and Incentives Increasing Further

We believe GRUB has been spending heavily to build and market its platform to attract new restaurants and diners. As we show in another section below, the capital spending is running nearly twice the depreciation rate. Marketing costs also remain high in dollar terms and as a percentage of sales despite rapid sales growth:

	YTD 19	2018	2017	2016
Sales Growth	34.6%	47.5%	38.5%	36.3%
Advertising	n/a	$170.3	$107.2	$75.5
Advertising % Sales	n/a	16.9%	15.6%	15.3%
Total Marketing	$224.2	$214.3	$150.7	$110.3
Marketing % Sales	23.1%	21.3%	22.1%	22.4%

While total marketing costs, which include advertising, have gained modest operating leverage on huge sales growth – the advertising costs continue to rise as a percentage of sales. Despite not breaking out advertising expense on a quarterly basis – we know that total marketing rose by 300bp y/y for the 9 months ending 9/19. Of the total dollar spending increase of $79.8 million, 70% of that was higher advertising.

What is not quantified in this is incentives offered to restaurants and diners to enroll or expand service. Those are recorded as reductions to revenues.

The company laid out in 3Q results that competition is causing growth to slow despite all this spending. It is pointing to a maturing market. Here are some quotes from the results with our conclusion:

- **Heavy Use Customers Are Already Customers, New Customers Produce Less Revenue** – *"In August, overall DAG (Daily Average Grubs/Orders) growth began trending noticeably lower than our expectations. As we dug into the data,* ***we saw that our newer diners, particularly those in our newer markets, were not driving as many orders as we expected*** *at that point in their lifecycle."*

- **Pricing Likely to Fall Going Forward** – *"but I think they're (diners) willing to pay more if they're able to get restaurants that they're only able to get from the expensive platform,* ***but once the restaurants have equalized (available on multiple online platforms), they're not going to continue paying those fees. They're (diners) incredibly price sensitive*** *and so we see over and over again in our tests. Like I said, it doesn't matter if it's delivery fee or service fee or a combination of both. It doesn't matter if you hide the fees or if you put them front and center on their ticket, they understand what they're paying. They're not going to pay to extract food and bev and a delivery/service fee in order to get it delivered, unless that's the only way they can get it delivered."*

- **Early Innings Are Over – Low Hanging Fruit Picked** – *"What we concluded is that* ***the supply innovations in online takeout have been played out and annual growth is slowing*** *and returning to a more normal longer-term state which we believe will settle in the low double digits…"*

- **Larger Competition Dividing Slower Growing Market** – *"…except that there are* ***multiple players all competing for the same new diners a****nd order growth." For years, we saw in our data that a Grubhub diner was extremely loyal to our platform. However,* ***our newer diners are increasingly coming to us already having ordered on a competing online platform, and our existing diners are increasingly ordering from multiple platforms."***

Grubhub is focusing on dealing with more competitors trying to divide up a slower growing market by accelerating efforts to sign up more restaurants to the platform. That should require more marketing costs, deals for joint advertising, and other incentives to entice people that may have already passed on Grubhub for a competitor. We would believe that given the company's own comments – this is no longer convincing a restaurant to sign up for online ordering. It's convincing a restaurant to change online providers, that is normally done with incentives.

It plans to offer enterprise customers more free delivery. Enterprise customers are chains like McDonald's or Taco Bell that already do their own advertising and already pay lower fees to Grubhub. However, for Grubhub this lower margin business keeps its base of diner customers continuing to use Grubhub.

Also, the plans are greater loyalty rewards for diners. These are essentially coupons for a discount on food or other fees – essentially buy 10 get the next one free type of promotion. Already 20% of customers are redeeming loyalty coupons and Grubhub wants to expand that. Also, more advertising and incentives will roll out to target these diners.

We're not going to argue that some of this may be necessary as the competitive pressure has increased. Nor are we going to question the company's plans. We are going to note that this higher spending is going to be expensive. They have already ratcheted up spending in 2019 and now expect to make a larger investment in 4Q19 and in 2020. Look at the trend for EBITDA and the guidance:

	2020e	2019e	2018	2017
Adj. EBITDA	> $100	$175-$180	$234	$184

Because of this forecast, we think investors should also focus on a few other variables that this may cause to squeeze the financial results even more.

Will Larger Customers and Competition Push for Faster Payment from GRUB?

The Grubhub model has customers ordering through the company's website and paying them mostly via credit cards. Grubhub collects the full amount of the sale, keeps its commission of just over 20% and remits the rest to the restaurant. Thus, Grubhub gets paid the full amount of the sale and has a payable set up for restaurants called – Restaurant Food Liability.

When total sales grow, this payable account grows and adds to GRUB's cash flow. That is only one of the variables. The other two are the percentage of the commission earned by GRUB of the total sale and the speed at which it pays the restaurants. We think all three of these variables could be under pressure if the competition increases. Here is how much cash flow is coming from this payable increasing:

	3Q19	2Q19	1Q19	4Q18
Chg Restaurant Payable	$6.3	-$16.2	$13.1	$1.3
Qtr Cash Flow from Ops.	$86.2	$55.8	$13.9	$60.1
% of Cash Flow	7.3%	-29.0%	93.9%	2.2%

	3Q18	2Q18	1Q18	4Q17
Chg Restaurant Payable	$11.5	-$16.8	$6.9	$4.0
Q's Cash Flow from Ops.	$49.4	$44.5	$71.5	$46.3
% of Cash Flow	23.2%	-37.6%	9.6%	8.6%

Seasonality makes this a cash drain in 2Q, but GRUB is getting cash flow overall from this source of having the restaurants allow it to carry this cash. We talked to some restaurant friends and they confirmed that other than maybe a holiday, they get paid the next day on credit card sales. However, GRUB is paying them in 10-11 days. Plus, the percentage taken by GRUB has been rising:

	3Q19	2Q19	1Q19	4Q18
Food A/P	$130.5	$124.3	$140.5	$127.3
Gross Sales	$1,400.0	$1,459.0	$1,502.3	$1,376.9
Commission	$322.1	$325.1	$323.8	$287.7
Owed to Restaurant	$1,077.9	$1,133.9	$1,178.5	$1,089.2
DSO on A/P	11.1	10.0	10.9	10.7
Commission %	23.0%	22.3%	21.6%	20.9%

	3Q18	2Q18	1Q18	4Q17
Food A/P	$122.9	$110.0	$126.9	$119.9
Gross Sales	$1,214.5	$1,220.0	$1,245.0	$1,138.6
Commission	$247.2	$239.7	$232.6	$205.1
Owed to Restaurant	$967.3	$980.3	$1,012.4	$933.5
DSO on A/P	11.6	10.2	11.4	11.7
Commission %	20.4%	19.6%	18.7%	18.0%

GRUB is very clear that is facing more competition for the first time. We think speeding up the payment to restaurants is an easy demand from the restaurants. That is especially true when it is dealing with larger customers such as Yum Brands, Wendy's, etc. Cash flow from operations for the last 12 months was $216 million at GRUB. It is holding $130 million in payables to restaurants. If the DSO drops to 3 days from competitive pressure – it would consume $95 million in cash flow as that payable account falls to $35 million.

Eventually, this would transition to a point where gross sales growth would likely make this a positive on cash flow again, but to a much smaller degree – 3 days of sales on $2 billion in gross sales per quarter is still larger than 3 days of sales on $1.5 billion in gross sales. However, this would be producing much less cash flow than it has historically, and the growth would come after several trends push it down considerably.

GRUB is also touting how it is the lowest priced player – yet it is ramping up incentives for diners to get them to stay with Grubhub and perhaps order more. That would lower the commission structure. Restaurants can also change the commission structure too. Y/Y GRUB is picking up well over 200bp in commissions this year. That is over $100 million in annualized revenue too. That would lower revenues and thus cash flow and would further reduce the gross sale and lower what is owed to the restaurants. That would pressure cash flow and EPS. If only $20 million of the $100 million falls to operating income, it would be a $0.17 impact on EPS. Current forecasts for 2019 would be about $0.70 in EPS.

Will Employees Start to Require More Cash Wages over Stock Compensation?

Another sizeable part of cash flow comes from paying employees with stock. The company gets to conserve cash and gets a tax credit too. The employees see greater upside on than straight wages if the stock price rises. Often what happens is employees get shares with exercise prices of $1 or less before an IPO and become enormously wealthy when the stock goes to $20. It is a much slower way to riches when new shares have an exercise price of $30 and the stock is $22. What is even worse for employees is when the stock price is falling. Now their options have little or no value and they are effectively working for lower cash wages with minimal upside.

In the case of GRUB, the stock peaked at $144 in the summer of 2018. It's now $42 after bouncing off $33. However, look at the exercise prices on recent RSU (Restricted Stock Unit) awards and stock options:

	YTD 2019	2018	2017	2016
RSUs Issued (000s)	1,990	1,325	1,943	1,060
Avg Ex Price	$74.54	$94.41	$40.99	$29.21
Outstanding RSUs (000s)	3,047	2,328	2,454	1,516
Avg Ex Price	$73.36	$67.33	$37.56	$28.46

	YTD 2019	2018	2017	2016
Stock Options (000s)	334	675	619	166
Avg Ex Price	$76.98	$62.89	$38.49	$26.58
Outstanding Options (000s)	2,771	2,649	2,639	2,992
Avg Ex Price	$38.60	$33.11	$25.53	$22.43

All the shares being offered as compensation in the last two years are far out of the money and the stock would likely have to double in most cases to be exercisable at this point. The total of RSUs outstanding have a weighted average exercise price of over $73.

We believe this points to employees wanting more in cash wages to recover the potential lost income from 2018 and 2019 in stock compensation. Otherwise, more may leave and look for a new start-up company. If they won't accept as much stock compensation with the stock price down, that could have a sizeable impact on cash flow too:

	YTD 2019	2018	2017	2016
Cash From Ops	$156.0	$225.5	$154.1	$97.7
Stock Comp.	$54.8	$55.3	$32.2	$23.6
Tax Benefits	$3.8	$15.9	$7.1	$0.0
% of Cash Flow	37.6%	31.6%	25.5%	24.2%
Taxes Paid to Settle Stock Awards in Fin. Section	-$20.5	-$35.6	-$10.6	-$2.8

The first problem is GRUB has seen stock compensation as a percentage of operating cash flow rise as the stock has declined. How long can this trend run? Second, as GRUB depends on stock compensation and a rising stock price to entice employees to accept it – here is their guidance for 4Q19 vs 4Q18:

	4Q19 Guide	4Q18
EBITDA	-$4.0/$6.0	$21.4
Adj. EBITDA	$15.0/$25.0	$42.1
Net Income	-$44.8/-$33.9	-$5.2

We think this is a sizeable risk. We doubt stock compensation goes to $0, but what if it falls by $20-$30 million per year? That is a sizeable part of cash flow that could vanish. It would also be a $0.16 reduction to the company's non-GAAP EPS.

Capital Spending Looks Fine – Will That Be the Case if Cash Flow Takes a Hit?

We do not have a problem with GRUB's depreciation and amortization lives for internally built assets. This is a software company that creates apps for users, websites for its own computers and restaurants and ties all together. It also processes payments and allows all parties to monitor orders and estimate times plus make changes to food items.

The computer equipment is depreciated over 2-3 years. Software developed in house is capitalized and amortized over 1-3 years. Purchased software is amortized over 3-5 years. We have no problem with this schedule. Plus, GRUB is continuing to spend more on PP&E than it is depreciating – which we consider a positive for a growth company:

	YTD 19	2018	2017	2016
Software Amtiz	$24.0	$21.8	$12.0	$5.4
PP&E Deprec.	$21.7	$21.6	$11.7	$8.9

	YTD 19	2018	2017	2016
Software CapX	$35.1	$31.2	$21.3	$12.8
PP&E CapX	$42.7	$43.0	$19.0	$24.1

What if the cash flow issues related to stock vs. cash compensation and restaurants demanding faster payments arise? Here is what reported free cash flow is now:

	YTD 19	2018	2017	2016
Cash From Ops	$156.0	$225.5	$154.1	$97.7
CapX	$77.8	$74.2	$40.3	$36.9
Free Cash Flow	$78.2	$151.3	$113.8	$60.8

The company's guidance calls for EBITDA to fall more than $60 million next year as it ramps up incentives and advertising. Will that ever go away or is it the new normal? From GRUB's commentary, is sounds as though adding more restaurants and dining users will be more

expensive and that pricing rates for revenues should fall. We're not certain a pricing squeeze is fully in the lower EBITDA guidance.

Stock compensation is running about $73 million for 2019. We do not think stock compensation will ever go to zero. But it is possible for 20%-40% to become cash payments in our view given how much the stock needs to rise for employees to be able to exercise stock compensation awarded in 2018 and 2019. That would mean $15-$30 million in lower cash flow too. Just like speeding the payments to restaurants would involve perhaps a $95 million one-time reduction in cash but would then revert to a minor impact on cash flow tied to growth.

Where we think the risk is right now is the impacts to cash flow may be hitting at the same time. Losing $60 million in EBITDA, $20-30 million from stock compensation, and let's say $40 million from paying restaurants faster is a $120 million hit to free cash flow. That is a bigger decline than what free cash flow is expected to be in 2019 and definitely more than 2020.

The Basic Acquisition Model for Growth Is Changing

In recent years, GRUB added new restaurants and new customers by buying other food take-out companies such as LevelUp and Eat24. In most cases, these companies had fairly modest levels of sales but brought relationships with regional restaurants, college students as customers, or a new technology to integrate into GRUB's larger system. The result of these acquisitions was free cash flow was continually negative if these deals are treated as extensions of capital spending:

	YTD 19	2018	2017	2016
CFO	$156.0	$225.5	$154.1	$97.7
CapX	$77.8	$74.2	$40.3	$36.9
Acquisitions	$8.8	$529.8	$358.5	$66.1
Free Cash Flow	$69.4	-$378.5	-$244.7	-$5.3

If GRUB has built these relationships and businesses in-house, the costs would have been expensed as wages, marketing, advertising, purchases of PP&E. Much of it would have been expensed as it was incurred, and GRUB's profitability would have been materially lower, and the company may not have even been profitable. Using the company's adjusted

EBITDA figures, the negative free cash flow far exceeds what it generated in EBITDA in those years, a negative $559 million in free cash flow against $722 million in adjusted EBITDA. That's a $1.3 billion negative swing. Even if the acquisitions had taken three-years to build and expense-free cash flow would have been about -$600 million from 2016-ytd 2019.

In 2019, GRUB has seen the acquisitions disappear from the model and they have begun investing heavily in the business. Thus, the EBITDA figures are falling now, and guidance calls for that to continue. So, the first point to consider is unless GRUB grows via acquisition and views those deals as having zero cost by not amortizing goodwill plus adding back amortization of other intangibles – the profitability is likely to fall at GRUB as it invests internally instead. That's why the guidance has EBITDA falling from $234 million in 2018 to "above $100 million" for 2020.

We View Grubhub's Acquisition Accounting as Aggressive and Likely to Lead to Writedowns

It's not just that the accounting and presentations are able to show these huge acquisitions as having essentially no cost; but it is how the purchase prices were allocated:

Acquisition	Price	Goodwill	GW %	Dev. Tech	Restaurant Relations	Diner Relations
Tapingo	$152.1	$121.9	80.1%	$9.8	$11.3	$0.0
LevelUP	$369.4	$296.2	80.2%	$20.1	$10.2	$3.9
Eat24	$281.4	$136.0	48.3%	$2.6	$126.2	$35.2
Foodler	$51.1	$17.5	34.2%	$2.0	$35.2	$1.4
LABite	$65.8	$40.2	61.1%	$1.7	$46.5	$0.0

Recent deals have seen over 80% of the purchase price go to goodwill that will not be expensed at all. It will only be tested for impairments. However, there are many red-flags that may make an impairment likely:

- The stock price has fallen significantly and goodwill plus intangibles are just over 100% of book value. That draws attention that perhaps the business climate has changed for the worse and may be difficult to justify goodwill valuations. It can also cause a valuation of all assets on a valuation of what they would cost to replace now verses the carrying amount.

- The company is admitting that pricing is going to decline via loyalty incentives paid to diners, what people will actually pay long term, and competition trying to win over the same customers perhaps driving down orders per user. That should lower ROI forecasts on valuation of goodwill. The word “commodity” was used 5 times in the 3Q discussions to describe parts of the business.
- GRUB is having to invest considerably more in the business and expects that to reduce profitability – that also should lower ROI forecasts.

We also want to focus on the longer amortization lives for intangibles that are being expensed over time, against the depreciation and amortization schedule for assets built in-house:

PP&E	Dep/Amrt Lives
Computer Eq.	2-3 years
Developed Software	1-3 years
Purchased Software	3-5 years

We already know that customer relationships are built with marketing and sales along with tech people building and installing systems. Those are expensed as they are incurred. Compare that with the amortization of acquisitions:

Acquired	Dep/Amrt Lives	Gross Value	Net Value 3Q19
Restaurant Relations	17.5 years	$497.8	$371.1
Developed Tech	4.7 years	$35.8	$22.0
Diner Acquisitions	5.0 years	$48.3	$30.8

We are not going to push too hard on the acquired tech assets – if they buy software from others, they are amortizing over up to 3-5 years too. The diners should have some churn to them, and many are likely very lumpy in their use of Grubhub. A case can be made that that asset should be amortized more quickly and that when the company is specifically boosting incentives to retain diners – the ROI is decreasing, and an impairment may be necessary.

We are most concerned that they are amortizing restaurant relations over 17.5 years and that asset is 24% of all intangible assets. More importantly, the company says that big chains like McDonald’s or Taco Bell don’t really need Grubhub to help with advertising and

they pay lower fees. Plus, it is those large chains where Grubhub is paying for free delivery so those are simply not very profitable for GRUB to begin with and having them on the platform is more for the additional food options for diners. The company admits that 80% of its profits come from independent and small chains. These customers use GRUB to help generate some of their marketing.

There are several studies that point to a high percentage of new restaurants close or are sold in the first year. More point to over half the restaurants close over a 5-year period. However, if the larger chains – where GRUB likely had its own relationship and were not acquired – aren't the bulk of profits or this intangible asset – then that asset value is based on a very high churning customer group. We think 17.5 years to amortize this is very aggressive and would actually expect to see 5 years or less. On top of that, GRUB is also having to invest more to sign and retain restaurants and encourage them to do more business with the company. That also points to lower ROI from when these deals were made and boosts the chances for an impairment.

Earnings	YTD 19	YTD 18
Amortization Exp.	$37.3	$31.1
Net Income	$9.2	$83.6
EPS	$0.10	$0.91

Amortization of the restaurant relationships is essentially $35-$40 million per year now. If it was amortized over 5-years, it would be $100 million in expense. How profitable is GRUB even before the ramp-up in incentives and marketing if its amortization schedule was more closely aligned with other PP&E and it cut $60 million off of income going forward? That is $0.65 in GAAP EPS.

Adding some of this together, just how profitable is Grubhub vs. it's reported adjusted results? The company adds back 100% of stock compensation and amortization of acquired intangibles when it reports EBITDA and EPS. Using guidance for 4Q's GAAP loss of $34-45 million, we estimate Non-GAAP EPS for 2019 will be about 60-cents vs. 2018's $1.66. We know they spent cash on acquiring intangible assets and we know that had they built them in-house they would have expensed them. Let's not even accelerate the amortization schedule or deal with goodwill – either of which would make this look even worse. We're simply adding back amortization of about one-third of intangibles as reported to the mix. And, let's assume $30 million of stock compensation has to become cash wages.

	2019e	2018
Sales	$1,295.9	$1,007.3
Adj EBITDA	$180.0	$233.7
$30 of Stock Comp	-$30.0	-$30.0
less amortization	-$50.7	-$42.5
BTN EBITDA	$99.3	$161.2
Adj Margin	13.9%	23.2%
BTN Margin	7.7%	16.0%

We can do the same with EPS. Stock compensation using $30 million in cash net of taxes is $0.26 in annualized EPS. The amortization of intangibles is $0.55 per share for the year. Using the company's forecast for a loss of $40 million in net income for 4Q19 – we get a starting point non-GAAP EPS of about $0.71 for 2019 ($0.83 of reported Non-GAAP EPS for first nine months and a GAAP loss for 4Q19 of $0.43 adding back $0.16 as 100% of net stock compensation and $0.15 in amortization for a net -$0.12 in 4Q).

	2019e	2018
Non GAAP EPS	$0.71	$1.66
$30 of stock Comp	-$0.26	-$0.26
less amortization	-$0.55	-$0.46
BTN EPS	-$0.10	$0.94

We see a sizeable amount of earnings as being overstated in adjusted figures by adding back recurring costs that did consume cash and the risk of GRUB needing to boost cash pay. With the higher marketing costs and pressure on pricing – the profitability looks lower going forward and that also puts many of the asset values related to goodwill and intangibles at further risk in our view.

Explanation of EQ Rating Scale

Rating	Description
6- "Exceptionally Strong"	Indicates uncommonly conservative accounting policies to the point that revenue and earnings are essentially understated relative to the company's peers. Higher possibility of reporting positive earnings surprises
5- "Strong"	Indicates the company has no areas of concern with its reported results and we see very little risk of the company disappointing due to recent results being overstated from aggressive reporting in recent periods.
4- "Acceptable"	Indicates the company may have exhibited a minor "red flag", but the severity of the issue is not yet a concern. Minimal risk of an earnings disappointment resulting from previous earnings or cash flow overstatement
3- "Minor Concern"	Indicates the company has exhibited either a larger number of or more serious warning signs than companies receiving a 4. The likelihood of an immediate earnings or cash flow disappointment is not considered to be high, but the signs mentioned deserve a higher degree of attention in the future.
2- "Weak"	Indicates the company's recently reported results have benefitted materially from aggressive accounting. Follow up work should be performed to determine the nature and extent of the problem. There is a possibility that upcoming results could disappoint as the impact of unsustainable benefits disappears.
1- "Strong Concerns"	Indicates that the company's recent results are significantly overstated and that we view a disappointment in upcoming quarters is highly likely.

In addition to the numerical rating, the EQ Review Rating may also include either a minus or plus sign. A minus sign indicates that our analysis shows the overall earnings quality of the company has worsened since the last review and there is a possibility the numerical rating will fall should the problem continue into the next quarter. Likewise, a positive sign indicates that the overall earnings quality is improving, and the company may see an upgrade in its numerical rating should the trend continue.

Key Points to Understand About the EQ Score

The EQ Review Rating is much more than a blind, quantitative scoring method. While we utilize proprietary adjustments, ratios, and methods developed over decades of earnings quality analysis, the foundation of all of our analysis is reading recent SEC filings, press releases, conference call transcripts and in some cases, conversations with managements.

The EQ Review Rating is not comparable to a traditional buy/sell rating. The Rating is intended to specifically convey the extent to which reported earnings may be over/understated. Fundamental factors such as forecasts for future growth, increasing competition, and valuation are not reflected in the rating. Therefore, a high score does not in itself indicate a company is a buy but rather indicates that recent results are a good indication of the underlying earnings and cash generation capacity of the company. A low score (1-2) will likely result in us performing a more thorough review of fundamental factors to determine if the company warrants a full-blown sell recommendation.

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