BEHIND THE NUMBERS
EARNINGS QUALITY & DIVIDEND SUSTAINABILITY RESEARCH

BTN Research

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Will Goodwill Be Expensed Again?

We have written about accounting for intangibles several times in recent weeks and found the following Wall Street Journal article discussing the FASB considering expensing goodwill again to be of particular interest.

Q2 Holdings (QTWO) EQ Review

Current EQ Rating*	Previous EQ Rating
2-	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 initiate earnings quality coverage of QTWO with a 2- (Weak) rating.

Q2 provides online platforms for smaller banks and financial institutions to allow customers to pay bills, transfer money, apply for loans, etc. without writing checks or visiting the physical bank. It has grown internally and with acquisitions and posted strong top-line growth. We think investors should be concerned that this company has no free cash flow. Also, even after adding back many recurring costs such as stock compensation, integration costs, and amortization of only portions of intangible assets – it has reported non-GAAP earnings and EBITDA that are very low at 9-cents per share and $12 million respectively for an $88 stock and a $4 billion enterprise value.

Those earnings look further inflated as the company has extended amortization lives for several capitalized costs in 2018. Moreover, it has started to borrow money to pay for acquisitions that are producing negative EBITDA.

- **The last 4Qs of EPS are -$1.49 and only reach 9-cents after adding back several recurring costs. EBITDA and earnings would remain negative if employees require higher cash wages at some point. The last five years have yet to see free cash flow at Q2, which we find amazing for a software company that collects upfront payments in cash as deferred revenues.**

- **Q2 capitalizes many recurring costs such as implementation costs getting customers set up and activated and sales commissions. These items are not adjusted for in non-GAAP results. In the 9-months ending in September 2019, capitalizing implementation costs added 9-cents to EPS and capitalizing commissions added 11-cents. Both are enough to almost wipe out adjusted EBITDA of $12.8 million by contributing $11.5 million.**

- **The capitalization looks even more aggressive as Q2 extended the amortization lives in 2018.** In 2017 and 2018 – the company says the commissions are closely tied to the revenue earned over the life of a contract. In 2017, that was the amortization period too. In 2018, both capitalized expenses went to a 5-7 year amortization period. Capitalized software also had the life extended to 5 years.

- **Acquisition accounting also looks aggressive.** We don't have pro forma results for all the deals, but for the two largest ones we have evidence that they lose money and the latest one has negative EBITDA. Despite that, **the bulk of the purchase price went to goodwill that will not be amortized. We think an impairment may be more likely given Q2's actual cash flow and the negative figures related to acquisitions**.

- **The acquired assets that are being amortized are occurring over a period longer than Q2's depreciation schedule of 3-5 years or internally built assets which are expensed as incurred. This is another area where Q2 modified asset lives as the largest part of intangibles is acquired technology. In 2018, Q2's average life for that asset rose from 3.9 years in 2015 to 6.3 years in 2018.**

- **Investors focusing on revenues should be aware that Q2 also forecasts price increases for customers and recognizes that boosts revenue above levels being billed. The company also has unbilled receivables,** which also pulls some revenue forward. Total receivables do not look problematic at this point – but historically revenue growth is helped when DSOs rise.

- **Deferred revenue declined with the adoption of ASC 606 but appears to be growing again for current deferred revenue. That is a positive for Q2.** The biggest drop in deferred revenues is coming in the long-term bucket which is tied to initial customers paying deposits. We think the company may simply be maturing and has more established customers vs. new ones today vs. 2016. We are not alarmed by the deferred revenue figures.

- **We question if Q2 needs to spend more on PP&E.** This is a tech company after-all and it is reporting 30% revenue growth. Yet, net PP&E was flat in 2017 to 2018. It recovered a little in 2019, but still looks to be an area where future cash flow could be impaired if capital spending needs to rise.

Big Picture Shows Negative Cash Flow and Earnings Even With "Adjustments"

We think this quote from the 3Q19 guidance should have people asking a few questions after Q2, with less than $1 billion in assets, made a $510 million acquisition:

> *"Adjusted EBITDA (for 4Q19), excluding the impact of the acquisition of PrecisionLender, of $11.0 million to $13.0 million. The addition of PrecisionLender will reduce the total adjusted EBITDA guide for the fourth quarter to $7.7 million to $10.5 million."*

The largest acquisition in Q2 history doesn't even have EBITDA?

Even with adjustments, this company does not make any money:

	3Q19	2Q19	1Q19	4Q18	TTM
GAAP Income	-$18,569	-$17,331	-$19,311	-$11,863	-$67,074
Stock Comp.	**$10,070**	**$9,569**	**$8,896**	**$8,623**	**$37,158**
Acq. Costs	$2,784	$2,048	$2,718	$1,820	$9,370
Amort Acq.	$2,853	$2,846	$2,846	$2,586	$11,131
Unoccupied lease	$244	$0	$0	$0	$244
Amort. Debt Discount	$5,380	$3,227	$2,548	$2,578	$13,733
Non GAAP Income	**$2,762**	**$359**	**-$2,203**	**$3,684**	**$4,602**
GAAP EPS	-$0.39	-$0.39	-$0.44	-$0.27	-$1.49
Non GAAP EPS	$0.05	$0.01	-$0.05	$0.08	$0.09

If actually counting full wages to employees – Q2 would not even be close to turning a profit even if acquisitions are added back. The same is true of EBITDA:

	3Q19	2Q19	1Q19	4Q18	TTM
GAAP Income	-$18,569	-$17,331	-$19,311	-$11,863	-$67,074
Stock Comp.	**$10,070**	**$9,569**	**$8,896**	**$8,623**	**$37,158**
Acq. Costs	$2,784	$2,048	$2,718	$1,820	$9,370
Depr/Amort.	$5,932	$5,975	$5,821	$5,361	$23,089
Unoccupied lease	$244	$0	$0	$0	$244
Taxes	-$31	-$237	-$39	-$3,176	-$3,483
Interest	$5,157	$3,173	$2,178	$2,345	$12,853
Adj. EBITDA	**$5,587**	**$3,197**	**$263**	**$3,110**	**$12,157**

We think it is a red flag that Q2 adds back everything and still only comes up with 9-cents in adjusted EPS for an $88 stock.

At the same time, this is a company that takes in considerable amounts of deferred revenues which help add to cash flow. Cash flow also adds back all stock compensation and acquisition-related costs – and yet Q2 doesn't post free cash flow:

	ytd 19	2018	2017	2016	2015	Total
Cash from Ops	-$1.3	$4.6	$9.5	$3.4	$5.4	$21.6
Capital Exp.	$12.5	$13.3	$13.3	$17.0	$7.4	$63.5

What Doesn't Q2 Capitalize?

Not only are adjusted earnings inflated by adding back stock compensation and not counting any amortization or integration costs of acquisitions – Q2 also has several cost items that appear to be inflating GAAP and non-GAAP earnings as well as adjusted EBITDA as the first part of that figure starts with GAAP income.

It's more than software – which Q2 capitalizes and amortizes over 5 years. From our experience – most companies amortize over 3 years or less. Amortization of software was $0.8 million in 2018 and $0.6 million through three quarters of 2019. If that had been amortized over 3-years, we estimate that 2008 would have been $1.3 million and 2019 YTD $1.0 million. **That basically added 1-cent to EPS in both periods.**

Implementation costs arise when Q2 installs software and sets up accounts. This includes wages as well as any software and hardware costs plus travel. Q2 capitalizes these costs – even though those wages and other costs are paid as incurred. Rather than amortize them over the term of the customer's contract – Q2 amortizes them over the life of the technology which it estimates at 5-7 years. It cites a high renewal rate to justify the longer amortization period. Here is what it capitalizes each year and amortizes:

	3Q19	2018	2017
Cap. Implementation	$10.4	$7.3	$5.2
Amort. Implementation	$5.4	$4.7	$4.4

The EPS impact of this is getting larger and Q2 does not adjust for this in adjusted earnings or EBITDA. **Remember that Q2 reported 9-cents in adjusted EPS for the trailing 12-months. It gained 9-cents in three quarters of 2019 and 5-cents in 2018 simply looking at the difference between immediate expensing and capitalizing.**

Not only is this becoming a larger source of earnings, **it appears that Q2 recently changed the amortization period.** Here is how Q2 discussed these costs in 2017:

> *"We capitalize certain personnel costs directly related to the implementation of our solution to the extent those costs are considered to be recoverable from future revenues. We amortize the costs for a particular implementation once revenue recognition commences, and **we amortize those implementation costs over the remaining term of the customer agreement**. Other costs not directly recoverable from future revenues are expensed in the period incurred."*

…And here is the discussion in 2018:

> *"The Company begins amortizing the deferred implementation costs for an implementation once the revenue recognition criteria have been met, and **the Company amortizes those deferred implementation costs ratably over the expected period of customer benefit, which has been determined to be the estimated life of the technology, which the Company estimates to be five to seven years.**"*

The unamortized amount is becoming a larger "asset" too and the long-term portion is rising:

	3Q19	2018	2017
Current Def. Imp. Costs	$4.6	$4.4	$3.6
L-T Def. Imp. Costs	$14.9	$9.9	$8.3

Deferred Solution and Other costs – include sales commissions and third party costs such as licenses and maintenance related to customer agreements. These are also capitalized and amortized over 5-7 years based on the estimated life of the technology. This also changed in 2018 to a longer life. Here is 2017's discussion:

> *"We capitalize sales commissions because the commission charges are so closely related to the revenues from the non-cancellable customer agreements that they should be recorded as an asset and charged to expense over the same period that the related revenue is recognized. We begin amortizing deferred solution and other costs for a particular customer agreement once the revenue recognition criteria are met and **amortize those deferred costs over the remaining term of the customer agreement**."*

…and in 2018:

> *"The Company begins amortizing deferred solution and other costs for a particular customer agreement once the revenue recognition criteria are met and **amortizes those deferred costs over the expected period of customer benefit, which has been determined to be the estimated life of the technology, which the Company estimates to be five to seven years."***

Two things also jump out here. First, in both years, the company says that the commissions are closely related to revenue from the contract – yet it still extended the life of the capitalized cost in 2018. Second, the commissions are paid in cash much more quickly. Part is paid when the contract is signed and a deposit is made and the rest is paid when the customer has been installed and turned on. Again, this is not something "adjusted" in the company's earnings and it is a sizeable figure:

	3Q19	2018	2017
Cap. Solution	$10.9	$6.7	$4.6
Amort. Solution	$4.4	$3.6	$3.1

This added 11-cents to EPS ytd in 2019 and 6 cents in 2018. This is also becoming a larger "asset."

	3Q19	2018	2017
Current Def Solution	$13.9	$10.5	$9.2
L-T Def Solution	$25.4	$16.8	$13.0

Aggressive Acquisition Accounting Helps Q2 Earnings

Add Q2 to the list of companies who want to claim that acquisitions have no cost. The cash flow statement shows that they spend a sizeable amount of cash on acquisitions:

	ytd 19	2018	2017	2016	2015	Total
Cash from Ops	-$1.3	$4.6	$9.5	$3.4	$5.4	$21.6
Capital Exp.	$12.5	$13.3	$13.3	$17.0	$7.4	$63.5
Total DSOs	$510.0	$130.7	$3.8	$0.0	$27.5	$672.0
Free Cash Flow	-$523.8	-$139.4	-$7.6	-$13.6	-$29.5	-$713.9

The 2019 figure includes Precision Lender which closed after the 3Q. The company is not even covering its capital spending in any year – let alone its acquisitions. They are paying for deals by diluting shares and adding debt to the balance sheet.

	ytd 19	2018	2017	2016	2015
New Borrowing	$307.0	$223.2	$0.0	$0.0	$0.0
Capital Exp.	$195.3	$0.0	$0.0	$0.0	$52.6
Shares O/S	47.8	42.8	41.2	39.6	37.3

The debt was issued at a discount and has a carrying value of $419 million and a principal amount of $546 million. Against that debt, they are forecasting adjusted EBITDA of $11-13 million for 4Q19 and roughly $20 million for the year, which adds back all amortization of intangibles, all integration costs, and stock option expense. (What happens to EBITDA if employees won't take stock and require more cash wages at some point?) Moreover, based on guidance for PrecisionLender that was the most recent deal – it is posting negative EBITDA at this time - and would lower the forecast of 2019 to $7.7-$10.5 million to own it for 12 months. It's not often people get the chance to lend money to a company with a debt to EBITDA ratio of 21-27 and no free cash flow. It's a good thing the debt is convertible and has an interest rate of only 0.75%.

We're not done with the acquisitions. Only one of these deals has a pro forma figure – Cloud Lending, which cost $125 million in late 2018. Here is what Q2 did in actual numbers in 2017 and 2018:

Actual	2018	2017
Revenues	$241.1	$194.0
Net Income	-$35.2	-$26.2

If they had owned it for all of 2017 and 2018 here is the pro forma forecast:

Pro Forma	2018	2017
Revenues	$252.5	$199.2
Net Income	-$49.0	-$43.1

Cloud Lending's $11 million in revenue and $14 million in losses would have slashed results if it had been owned longer. The $125 million price went into $77 million of goodwill and $50 million of intangible assets. Oh, and Q2 still owes a potential $59.5 million to Cloud Lending's management as an earn-out if it hits targets. We know the largest deal – PrecisionLender has negative EBITDA and cost $510 million. We won't know the breakdown of where that price will be allocated on the balance sheet until there is a 10-K.

Q2 has a large risk of a goodwill write-down in our opinion – given that it is tested for impairment annually and the company has no free cash flow. Before PrecisionLender, goodwill was $108 million on the balance sheet and total intangibles are $220 million. We anticipate that level rising considerably for another deal with negative EBITDA.

In our view, the company also has an aggressive accounting issue based on the fact that it amortizes other intangible assets over a period longer than it uses for internally-built assets. Most of those are expensed as incurred or written off on the following schedule:

	Estimated Lives
Computers/Equipment	3-5 years
Purchased Software	3-5 years
Developed Software	5 years

It is rare that we find a company that amortizes software over 5 years. Most are 2-5 years. That alone is inflating income and EBITDA in our opinion as noted above. But look at the size of goodwill that won't face amortization of acquired assets as well as other intangibles that do not appear to be generating cash flow:

Deal	Price	Goodwill	Intangibles
Gro Solutions	$25.5	$17.8	$8.3
Cloud Lending	$125.1	$77.2	$50.1
Social Money	$10.7	$4.1	$6.4
Centrix	$21.0	$8.8	$11.7

In 2015, after Social Money and Centrix, intangibles were being amortized on this time schedule:

Amortization	Lives
Customer Relations	4-6 years
Non-Competes	2-5 years
Trademarks	2-3 years
Acq. Tech	3-5 years
Capitalized Software	3 years

In 2018 after Gro Solutions and Cloud Lending, intangibles had this amortization schedule:

Amortization	Lives
Customer Relations	3-6 years
Non-Competes	2-5 years
Trademarks	2-10 years
Acq. Tech	3-7 years
Capitalized Software	5 years

The company moved from 3 years to 5 years on capitalized software. The largest part of intangibles is acquired technology – at 65% of gross intangibles. It went from an average life of 3.9 years to 6.3 years from 2015 to 2018.

Internally developed parts of the business are expensed as costs are incurred and under this schedule for fixed assets:

Depreciation	Lives
Computers/Hardware	3-5 years
Purchased Software	3-5 years

Looking just at capitalized software – moving from 3 years to 5 years is adding 1-cent to EPS on both an adjusted and GAAP basis. Q2 adds back the amortization of other intangibles already in computing its 9-cents in non-GAAP EPS as shown above vs. the GAAP EPS of -$1.49.

Several Areas Are Giving Minor Inflation to Revenues

When a contract is signed, Q2 estimates price increases that may occur going forward. It is recognizing these estimated increases into current revenues. This figure is not quantified but even Q2 admits this is inflating revenue in the 10-K, *"Periodic price increases are*

estimated at contract inception and result in contract assets as revenue recognition may exceed the amount billed early in the contract."

In addition, the company records some minor out-of-pocket expenses as revenues. These are billed to customers and charged to expenses as well. In recent years, this has been between $1.5-$1.7 million. That is roughly 1% of revenue growth. That's no-profit sales but people are ignoring profit margins at this point to focus on total top-line growth.

There are also unbilled receivables that make up about 15% of total receivables. These normally arise from customers exceeding minimum transaction volumes. They are recorded as revenues when they happen and are billed the next month. There is not anything overly nefarious with that in our view. But why the rush? Why not recognize revenue the next month? One-day of revenues from this source is almost $0.9 million or 1% of revenue growth. Unbilled receivables are 4.1 days of sales and have risen since 2017.

Accounts Receivable are also lumpy in terms of DSOs. We noticed that when DSOs are growing, their revenue growth tends to rise as well. When DSOs decline, revenue growth also tends to fall like in the 9/19 quarter:

	3Q19	2Q19	1Q19	4Q18
Total A/R	$24.4	$26.6	$19.6	$19.7
Unbilled A/R	$3.6	$3.5	$3.2	$3.2
Total DSOs	27.9	31.3	25.0	26.7
Unbilled DSOs	4.1	4.1	4.1	4.4
Seq. Sales Gr.	3%	9%	6%	11%

	3Q18	2Q18	1Q18	4Q17
Total A/R	$23.1	$27.0	$16.9	$13.2
Unbilled A/R	$2.8	$2.9	$5.6	$2.1
Total DSOs	34.9	42.1	28.1	23.3
Unbilled DSOs	4.2	4.5	9.3	3.7
Seq. Sales Gr.	3%	7%	6%	3%

	3Q17	2Q17	1Q17	4Q16
Total A/R	$15.8	$15.0	$8.5	$12.2
Unbilled A/R	$2.0	$2.0	$1.1	$1.2
Total DSOs	28.8	28.7	17.3	26.4
Unbilled DSOs	3.6	3.8	2.3	2.6
Seq. Sales Gr.	5%	7%	6%	10%

Receivables do not appear problematic at this time. It is also worth noting that Q2 has no reserve for bad debt on receivables at all, which also helps earnings.

Deferred Revenue Days Are Declining – But Not Current DSOs

The company gets 70% of its revenues from subscription fees that are billed in advance to set up systems for customers. Also, customers are billed in advance monthly, quarterly, or annually. Revenue is recognized as service is provided. The cash received in advance is put into deferred revenue and amortized into revenue as the service is provided. Deferred revenues are also an indication of how much of next quarter's sales have essentially already occurred and how much the next quarter will be dependent on signing new contracts.

With the adoption of ASU 2014-19 as part of ASC 606 in January 2018, Q2 saw deferred revenues decline by $12 million. Of that total, $11.1 million came from current levels of deferred revenues. Revenue in 2018 was also increased by $7.7 million. Based on the deferred revenue levels, in 2018, we estimate that the accounting change lowered total deferred revenue in terms of Days of Sales by 20-21 days and within that total - current deferred revenue by 18-19 days.

To us, it is a positive sign that DSOs for current deferred revenue have been increasing for the last two quarters. It is a negative sign that overall DSOs are down much more than the adjusted 20-21 days from 2017 and 2016:

	3Q19	2Q19	1Q19	4Q18
Deferred Rev.	$77.4	$71.3	$69.5	$65.6
DSOs	88.7	83.8	88.9	89.1
Current DSOs	59.6	54.1	57.9	57.7

	3Q18	2Q18	1Q18	4Q17
Deferred Rev.	$60.2	$52.4	$58.9	$66.7
DSOs	90.8	81.6	98.1	117.7
Current DSOs	52.5	51.7	64.0	67.8

	3Q17	2Q17	1Q17	4Q16
Deferred Rev.	$68.8	$62.6	$58.7	$61.8
DSOs	125.3	119.9	120.3	133.8
Current DSOs	73.8	61.4	59.0	65.2

	3Q16	2Q16	1Q16	4Q15
Deferred Rev.	$64.6	$56.7	$52.3	$52.2
DSOs	153.8	143.8	152.1	156.8
Current DSOs	76.9	65.3	68.9	69.2

The non-current deferred revenues would more likely include fees related to advance payments for system implementation and maintenance. That is where the drop in DSOs has been from 75-80 days in 2016 to 50-60 days in 2017 to about 30 days now. The ASC change had little to do with this, as long-term deferred revenues only fell by about $0.9 million with the new rules. We believe there is some "law of bigger numbers" going on here with more established customers now than 3-4 years ago when some new customers coming onboard with a large up-front deposit had a heavier weight on deferred revenues.

Arguably, the short-term deferred revenues have largely recovered. The one-time drop of $11 million resulted in DSOs falling about 18 days in 2018, but that drop has been lapped and all those deferred revenues have likely been realized from before the account change. Q2 is back to within a couple days of levels seen in 2016 and 2017 before the change on current deferred revenues.

Overall, deferred revenues rise with sales each year. In 2018, there was very minimal growth with the accounting change and that bounced back in 2019. We do think investors should be concerned about Q2's marginal cash from operations overall and how much they gain from deferred revenue growth. We doubt that 2020 will see the same type of growth as 2019 and thus could be a cash flow headwind going forward.

	3Qytd	2018	2017	2016	2015
Cash from Ops.	-$1.3	$4.6	$9.5	$3.4	$5.4
Cash From Def. Rev.	$11.8	$4.5	$4.8	$9.6	$14.0

Is Q2 Spending Enough to Remain Competitive?

This is a tech company that lists among its competitors: NCR, First Data, Fiserv, Moody's and Oracle. Revenues are growing both internally and via acquisition:

	ytd 2019	ytd 2018	2018	2017	2016	2015
Revenues	$228.6	$173.9	$241.1	$194.0	$150.2	$108.9
Growth	31%		24%	29%	38%	38%

And yet, net PP&E and depreciation have largely stalled:

	2018	2017	2016	2015
Net PP&E	$35.0	$34.5	$27.5	$24.4
Depreciation	$9.7	$9.2	$7.3	$5.5

In 2019, net PP&E has only increased to $39.9 million despite a 31% increase in revenues. We know the company is free cash flow negative on current capital spending – but First Data and Oracle are fighting Q2, which does not appear to be updating its computers very quickly.

Lamar Advertising (LAMR) – 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 initiate earnings quality coverage of LAMR with a 4- (Acceptable) rating.

Lamar Advertising (LAMR) is a real estate investment trust (REIT) that operates outdoor billboards as well as transit displays and highway logo advertising signs. Its services include ad copy production as well as placement and maintenance of the advertising material on its displays. As a REIT, its qualifying activities are not taxed at the corporate level and in return, it must pay out at least 90% of its earnings to shareholders in the form of dividends. Investors are therefore focused on the company's yield and its ability to maintain and grow its payout over time.

A popular measure for REITs is the AFFO (Adjusted Funds from Operation) payout ratio, or the company's dividend as a percentage of AFFO. This currently stands at 68% for LAMR. It currently yields 4.1% and grew its dividend by 5% in 2019. On the surface, these measures look attractive. While we do not have any large, immediate concerns with LAMR, we are concerned that the company's AFFO measure does not adequately reflect cash requirements to replace aging advertising structures. More specifically, we note:

- The company recorded real estate-related depreciation and amortization expense of $230 million for the 12-month period ended 9/19 which it adds back in its calculation of FFO (Funds from Operation). During the same period, it recorded total capital spending of $133 million and subtracted a maintenance capex estimate of $48.5 million to arrive at AFFO (Adjusted Funds from Operation) to reflect the ongoing cost of eventually replacing advertising structures in service. LAMR depreciates its dvertising structures over 5-15 years. Dividing the current advertising structure

balance by the high end of 15 years implies annual depreciation expense of $190 million. This does not include the site location intangible assets picked up from acquisitions which is also amortized over 15 years. This implies another $150 million in annual real estate-related amortization expense. We are therefore concerned that the $45 million maintenance capex figure does not adequately reflect the eventual cost the company will incur to replace its billboards as they wear out.

- LAMR has been gradually shifting its mix of billboard displays to digital boards from the traditional static billboards. Since 2011, the number of static billboards has increased by about 9% while the number of digital boards has more than doubled. Capital spending on new digital boards has exceeded that of static boards for years. These digital boards are more expensive to install but generate higher revenue and profits per board given their higher advertising rates and their ability to display multiple ads per minute. New digital boards are expected to have an average service life of 10 years. However, much of the company's installed base of digital boards were picked up in acquisitions and many may be closing in on the end of their service lives. This could cause a quick ramp-up in spending to replace them over the next few years. We are already starting to see an acceleration in capital spending on digital boards which jumped by more than 20% in the nine-month period ended 9/19.

- Dividend growth has outrun free cash flow growth in recent years and the dividend now consumes more than 80% of free cash flow. In addition, much of the growth in recent years has come through acquisition with cash spent on acquisitions far exceeding free cash flow after the dividend. The company's debt covenants require the total net debt ratio to stay below 6.5 and the secured debt ratio below 3.5. Total net debt was 4 times at the end of the 9/19 quarter, but we estimate the secured debt ratio was about 3.3.

- On the positive side, LAMR can cut its growth capex and acquisition spending quickly which can allow it to limit free cash flow declines during downturns. In the wake of the 2008 financial crisis, LAMR slashed its capital spending and actually saw free cash flow grow in 2009 and 2010.

- On January 1, 2018, the company adopted ASC 606 for revenue recognition. This had a negligible impact on the company as the bulk of its contracts were accounted for as leases under ASC 840. However, on January 1, 2019, LAMR adopted ASC 842 for lease accounting. Its contracts no longer qualified for lease accounting under the new method and the company was required to account for its contracts under ASC 606

which requires it to capitalize the cost of setting up advertising material on billboards under new contracts and amortizing it over the contract term. The company adjusted the beneficial impact out of its calculation of adjusted EBTIDA and AFFO, but not FFO. Reported FFO growth was 12.6% for the 9 months ended 9/19, but this falls to 10.8% after adjustment for the accounting change. We do not see this a huge problem given most investors will focus on AFFO. However, investors should be aware of the impact on FFO and be monitoring it going forward.

Capex Is Lagging Depreciation and Maintenance Capex Seems Light

As a real estate investment trust (REIT), LAMR is a capital-intensive business on which investors are mainly focused on its ability to maintain and grow its cash distributions. As a REIT, it is required to pay out at least 90% of its earnings as dividends to shareholders. This leads to investors focusing on cash-related measures of performance including earnings before taxes, depreciation and amortization (EBITDA), Funds from Operation (FFO) and Adjusted Fund from Operation (AFFO). The components of those measures are shown below for the last three trailing 12-month periods ended September:

Table 1

Trailing 12 Months as of:	9/30/2019	9/30/2018	9/30/2017
Adjusted EBITDA	$764.531	$705.566	$666.681
		-	-
Reconciliation of Net Income to FFO			
Net income	$365.051	$296.703	$311.037
Depreciation and amortization related to real estate	$230.436	$210.572	$194.569
Gain from disposition of real estate assets and investments	-$4.709	$8.279	-$6.883
Non-cash tax benefit for REIT converted assets	-$17.031		
Adj. for uncons. affiliates and non-controlling interest	$0.824	$0.644	$0.867
Funds from Operations (FFO)	$574.571	$516.198	$499.590
		-	-
Reconciliation of FFO to AFFO			
Straight-line income	-$2.033	-$0.592	-$0.358
Impact of ASC 842 adoption (lease accounting standard)	-$6.955	$0.000	$0.000
Stock-based compensation expense	$24.776	$25.284	$15.970
Non-cash portion of tax provision	$2.535	$1.242	$0.066
Non-real estate related depreciation and amortization	$14.724	$12.780	$12.663
Amortization of deferred financing costs	$5.270	$4.916	$5.206
Loss on extinguishment of debt		$15.429	$0.071
Capitalized expenditures—maintenance	-$48.543	-$41.812	-$42.908
Adj. for uncons. affiliates and non-controlling interest	-$0.824	-$0.644	-$0.867
Adjusted Funds from Operations (AFFO)	$563.521	$532.801	$489.433
Diluted AFFO per share	$5.63	$5.39	$4.99

EBITDA excludes depreciation and amortization which makes it very misleading as a measure of how much money is available for distribution to shareholders. LAMR owns and leases the parcels of land on which it constructs its advertising billboards. It adds to these assets both by developing its own sites as well as obtaining them via acquisitions. These structures represent the bulk of the assets on its balance sheet. They are recorded under PPE and are depreciated over a period ranging from 5-15 years. When the company makes an acquisition, it records some of the purchase price under property, plant and equipment (PPE), but the largest component of an acquisition is typically an intangible acquisition entitled "site locations" which it amortizes over a 15-year period. The following table shows the gross balances for both:

Table 2

	12/31/2018	12/31/2017
Advertising Structures (in PPE)	$2,817	$2,704
Site Locations in Intangible Assets	$2,229	$2,072
	$5,046	$4,776

Using the high end of 15 years gives us a rough annual depreciation expense for PPE of about $190 million ($2.8 billion/15 years). Likewise, an amortization period of 15 years for site locations implies another $150 million in amortization expense. The company's calculation of FFO from Table 1 above shows the company adding back $230 million to net income in the most recent trailing 12-month period to net income to arrive at FFO, far below the combined depreciation of advertising structures plus amortization of site locations of $340 million. Not all of the site location intangible assets pertains to actual advertising structures, but we still believe there is still an element of replacement cost reflected in the balance that should be reflected in real estate amortization. As such, the company's reported depreciation and amortization expense related to real estate seems low.

Adding back this depreciation and amortization does not account for the cash flow that the company will have to spend in the upcoming years to replace these assets as they wear out. LAMR does disclose a breakout of capital spending on an annual basis that gives more detail on growth capex versus maintenance and improvements:

Table 3

	12/31/2018	12/31/2017	12/31/2016
Gross Real Estate Assets Beginning Balance	$3,074.046	$2,998.540	$2,856.243
Capex on New Advertising Displays	$54.151	$49.946	$50.799
Capex on Improvements/redevelopments of Existing Displays	$12.781	$6.265	$12.031
Capex Other Recurring	$34.758	$32.523	$26.254
Land Acquisitions	$15.368	$14.904	$30.283
Acquisition of Advertising Displays	$82.617	$32.109	$69.821
Assets Sold or Written-off	-$70.494	-$61.306	-$47.317
Foreign Exchange	-$1.793	$1.065	$0.426
Balance at End of Year	$3,201.434	$3,074.046	$2,998.540

The total of the "Capex on Improvements and Redevelopments" line and the "Capex Other Recurring" line is $47.5 million which is reasonably close to the "Maintenance Capex" amount for that period of $43 million. However, given the company's reported depreciation and amortization of real estate and our estimate of depreciation and amortization of advertising structures and site locations, we question how realistic a mid-$40 million maintenance capex figure is. Therefore, we believe reported AFFO does not adequately reflect how much cash the company will have to spend in the future to replace aging assets. As we discuss below, we believe the growth in true maintenance capex will accelerate in upcoming years due to the shift to digital billboards.

Digital Boards May Drive Acceleration in Maintenance Capex Growth

We also believe that in the future, the maintenance capex number is likely to rise faster than the addition of new boards given the mix shift to digital boards.

For several years, LAMR has been expanding its collection of digital billboards more quickly than its traditional static billboards. Table 5 below shows the breakdown of its static versus digital billboards since 2011 and the percentage of revenue coming from digital boards:

Table 5

	2018	2017	2016	2015	2014	2013	2012	2011
Total Billboard Displays	156,900	149,900	149,000	144,000	144,000	145,000	144,000	143,000
Growth	4.7%	0.6%	3.5%	0.0%	-0.7%	0.7%	0.7%	
Static Billboards	153,800	147,100	146,400	141,700	141,900	$143,120	142,300	141,600
Growth	4.6%	0.5%	3.3%	-0.1%	-0.9%	0.6%	0.5%	0.0%
Number of Digital Billboards	3,100	2,800	2,600	2,300	2,100	1,880	1,700	1,400
Growth	10.7%	7.7%	13.0%	9.5%	11.7%	10.6%	21.4%	0.0%
Digital Rev. % of Total Billboard Rev.	24%	22%	21%	19%	18%	18%	15%	14%

We can also see the focus on digital boards in the company's breakdown of its capital spending by category which is shown below for the last three trailing 12-month periods ended September:

Table 6

	9/30/2019	9/30/2018	9/30/2017
Billboards - traditional	$48.570	$36.237	$37.387
Billboards - digital	$53.226	$43.860	$37.992
Logo	$11.591	$10.205	$8.769
Transit	$3.280	$6.662	$0.675
Land and buildings	$8.312	$12.116	$9.987
Operating equipment	$8.165	$7.977	$8.423
Total capital expenditures	$133.144	$117.057	$103.233

Since 2011, the company has increased its number of static billboards by about 10% while it has more than doubled its number of digital billboards. The gradual shift to digital boards is a key part of the company's overall growth strategy as digital boards draw considerably

higher rents per ad than static boards. In addition, the displays multiple ads per minute, allowing one board to display ads from multiple advertisers. Profitability per board is, therefore, higher than that of a comparable static board despite the higher cost to acquire.

The estimated life of new LED billboards is about 10 years. Therefore, boards placed into service in the 2010-2011 time frame are nearing the end of their lives and will be needing replacement. It is key to realize that much of the increase in billboards has come from acquisitions. While the company does not give consistent detailed information on the number of boards acquired and divested each year, we do know that it acquired approximately 9,300 billboards in acquisitions made during 2018. This implies that without the acquisitions, the number of billboards at the end of 2018 would have been approximately 147,600 which is 1.5% below the ending number of billboard displays as of 2017. We know that the company does divest assets, so the 2018 number was likely reduced by that. Therefore, it is possible that the 1.5% acquisition-adjusted decline estimated above is too pessimistic. Regardless, the data indicates that acquisitions have been a key driver in the recent growth in the installed base of billboards. This is important from the standpoint of depreciation and upcoming replacement costs since one cannot assume that all the digital billboards added in recent years were new and have ten years left on their lives. The ones picked up in acquisitions could actually be nearing the end of their lives and will require replacement in the not-too-distant future. In fact, we can see from the capex breakdown in Table 6 above that capital spending on digital billboards rose by more than 20% ($53.2 M vs $43.9 M) in the trailing 12-month period ended 9/19. We would expect this trend to continue going forward which could eat into both free cash flow and AFFO growth.

The Dividend Is Growing Faster Than FCF and Acquisitions Are Consuming More

The following table shows that while LAMR's cash flow from operations is growing, cash spending on the dividend is growing even faster:

Table 7

	T12 9/19	2018	2017	2016	2015	2014
Cash flows provided by operating activities	$602.727	$564.846	$507.016	$521.823	$477.650	$452.529
Capital expenditures	$133.144	$117.638	$109.329	$107.612	$110.425	$107.573
Free Cash Flow	$469.583	$447.208	$397.687	$414.211	$367.225	$344.956
Dividends/distributions	$380.305	$443.088	$244.201	$293.965	$265.510	$238.800
Dividends/distributions % of FCF	81.0%	99.1%	61.4%	71.0%	72.3%	69.2%
Acquisitions	$643.807	$477.389	$297.305	$585.054	$153.877	$65.021
Free Cash After Dividend and Acquisitions	-$563.211	-$473.269	-$143.819	-$464.808	-$52.162	$41.135

Note that the spike in the dividend in 2018 was driven by the timing of the payment of the dividend. Regardless, the dividend now consumes over 80% of free cash flow compared to less than 70% in 2014. If capital spending accelerates due to older digital boards requiring replacement as we explored in the above section, this will cut into free cash flow growth and push the dividend percentage of free cash flow even higher.

As we noted above, the company has been growing more in recent years from acquisitions. Cash spending on acquisitions has more than consumed cash after the dividend for the last several years, which has driven debt-to-adjusted EBITDA to 4.0 from 3.6 at the end of 2017. The company's debt covenants require it to keep its total debt ratio below 6.5 and its secured debt ratio below 3.5. Total net debt to adjusted EBITDA was approximately 4x at 9/19 and we estimate the net secured debt ratio was approximately 3.3x.

LAMR Can Cut Growth Capex in the Event of a Slowdown

LAMR reorganized as a real estate investment trust (REIT) during 2014. As such, it is required to pay out at least 90% of earnings in the form of distributions and dividends. Since that time, it has grown its dividend, posting 5.2%, 9.9% and 12.2% growth for 2019, 2018, and 2017, respectively. Given what we have shown above- the rising payout, the large amounts of cash spent on acquisitions leading to higher debt ratios, and the possibility of rising capex from aging digital boards, we believe dividend growth may come under continuing pressure in the years ahead.

This situation might seem to raise concern of a dividend cut in the event of an economic slowdown. However, we should point out that in the past, the company's free cash flow has held up surprisingly well during times of economic stress. It takes a few months for its contracts to begin to wind down and in that time, the company is able to scale its growth capital spending back significantly. Below is an interesting slide the company used to include in its investor presentations that demonstrates how it was able to salvage free cash flow in the wake of the Financial Crisis by cutting capex:

Lamar Advertising Co. ($mm)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	9 months ended Sept 2014
Adjusted EBITDA[1]	**$555.9**	**$512.1**	**$440.5**	**$467.0**	**$484.3**	**$511.3**	**$545.1**	**$407.4**
Less:								
Interest expense, net	155.3	153.0	177.1	168.7	152.0	139.0	131.4	77.0
Current tax expense (benefit)	31.0	(10.7)	(16.0)	1.1	2.8	1.9	4.0	8.7
Preferred dividends	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3
Capital expenditures	220.5	198.1	38.8	43.5	107.1	105.6	105.7	83.9
Free cash flow	**$148.7**	**$171.3**	**$240.2**	**$253.3**	**$222.0**	**$264.4**	**$303.6**	**$237.5**

Lamar has the ability to reduce maintenance capex, allowing it to protect AFFO even in difficult economic cycles

Obviously, the company can completely discontinue acquisition spending in the event of a crisis. Cutting growth capex and acquisitions would obviously eat into growth, but this puts in perspective that an economic slowdown does not automatically translate to a dividend cut for LAMR at this point.

Change in Accounting Method Adding Slight Boost

On January 1, 2018, LAMR adopted ASC 606 for revenue recognition. The main difference for the company was the requirement to capitalize the cost of installing advertising material on displays under new contracts and amortize the cost over the period the ad was expected to run. At that time, the bulk of the company's contracts were accounted for as leases under ASC 840, so the adoption of ASC 606 had an immaterial impact on results at that time. However, on January 1, 2019, the company adopted ASC 842 for lease accounting. Its contracts do not qualify for treatment as leases under the new method, so the company was required to account for its contracts under ASC 606. LAMR explained this in its 9/19 10-Q as follows:

> *"The majority of our billboard, logo, and transit advertising space contracts commencing prior to January 1, 2019 are accounted for under ASC 840 and will continue to be accounted for under the topic until they are completed or modified.*

Advertising space contracts commencing or amended on or after January 1, 2019 which do not meet the criteria of a lease under ASC 842 are accounted for under ASC 606, Revenue. ***The majority of our new and modified advertising space contracts do not meet the definition of a lease under ASC 842.***

Due to the transition of our advertising space contracts into ASC 606 we are now required to capitalize our costs to fulfill a contract and expense the costs over the contract period. These costs include our costs to install advertising copy onto billboards. These costs were expensed as incurred under ASC 840*. During the [9-month] period ended September 30, 2019, we capitalized $19,348 of costs to fulfill a contract which is included in other current assets on the Condensed Consolidated Balance Sheets, net of expensed costs of $9,364. The expensed costs are recorded in direct advertising expenses (exclusive of depreciation and amortization) in the Condensed Consolidated Statements of Income and Comprehensive Income."*

Referring back to Table 1 above, one can see that LAMR adjusted the net impact of the adoption of ASC 842 out of its calculation of AFFO, and it is taken out of its Adjusted EBITDA figures. However, the impact is not taken out of FFO. For the nine months ended 9/19, reported FFO grew by 12.6%, but this falls to 10.8% after adjustment for the accounting change. We realize most investors will be paying more attention to adjusted EBITDA and AFFO, but they should be aware of the impact on FFO.

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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