BEHIND THE NUMBERS
EARNINGS QUALITY & DIVIDEND SUSTAINABILITY RESEARCH

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Citrix Systems (CTXS) EQ Review

Current EQ Rating*	Previous EQ Rating
4-	na

Rating scale
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 an explanation of the EQ Review Rating scale, please refer to the end of this report

We initiate earnings quality coverage of CTXS with a 4- (Acceptable) rating

CTXS is a provider of enterprise software solutions that allow employees to securely access applications and content across networks. In a nutshell, its products further the ability of IT managers to create virtual desktops that employees can utilize anywhere on multiple device types. The work-from-home movement created by the current COVID 19 crisis has served to lift CTXS's share price as most others have fallen. Please note that our rating is based solely on the analysis of the reliability of the company's reported results and in no way reflects any view of the company's near-term prospects in the current environment.

- CTXS is undergoing a major transition as it shifts its model from perpetual software licenses to a subscription model and on-premises model to a cloud-hosted model. This is similar to the shift that MSFT made towards its cloud-based subscription services over the last several years, although this is more magnified for CTXS given it is impacting virtually all of its products. The shift is having a profound impact on the company's reported revenue growth, profit growth, deferred revenue, unbilled revenue, and cash flow metrics that render surface level earnings quality metrics useless. This will be the case for some

time, but a review of the current situation is useful for setting the stage for future analysis.

- CTXS is reporting slight revenue declines as declines in the Support and Services segment and Product and License segment are being essentially offset by growth in the Subscription segment. This is due to existing perpetual license deals and multi-year service contracts being recognized upfront as opposed to Subscription agreements which are recognized over time. CTXS is still very early in the transition with only about 10% of the installed base of Citrix Workspace having migrated to subscriptions.

- The company has begun reporting an annualized recurring revenue growth number which is the annualized value of all recurring subscription deals at the end of the period. This figure has been growing by 40-50% for the last few quarters. While the company contends that the majority of the growth is from new customers, it is still benefiting significantly from a migration of existing customers that were previously on perpetual license deals. Before reporting ARR, the company was reporting the headwind to reported sales growth from the shift to subscriptions which was in the 700-800 bps range. It is reasonable to expect the headwind to have increased given the acceleration in the shift, but this serves to indicate that the near-50% ARR growth does not capture the true organic sales growth for the company.

- Cash flow has been declining during the shift to subscriptions as more money is paid upfront for perpetual license deals and multi-year service contracts. However, management has indicated that this should have run its course and we can expect to see cash flow growth to turn positive in upcoming quarters.

- Our main complaints regarding earnings quality at this point is the company's practice of adding back stock-based compensation expense to non-GAAP earnings. While this is a typical practice, in our opinion, this distorts the adjusted results as theses are amounts that the company would have to pay in cash if it didn't award the options. The add-back of stock compensation accounts for 15% to more than 30% of non-GAAP net income over the last eight quarters. What's more, it is increasing year-over-year which magnifies the distortion. For perspective, non-GAAP net income declined by 2.1% in the 12/19 quarter, but this decline widens to almost 10% if we subtract stock-based compensation from the non-GAAP figures.

Transition to Subscription Model

CTXS offers its functionality through multiple channels. Essentially, customers can buy a perpetual license for a lump sum and receive the software which they install on their servers and use indefinitely. They can also buy a term license whereby they pay a lump sum for the right to use the software over a specified time frame. Finally, they can subscribe to the company's cloud-hosted offerings where they pay a periodic fee to access the application online rather than license the software for installation on its servers. Think subscribing to *Office 365* rather than buying a disc you install on your computer.

The company reports revenue in three segments: Subscription, Product and License, and Support and Services. It also breaks out its Subscription revenue into SaaS (software-as-a-service) and non-SaaS components. The following table shows segment revenue for the last three years:

Table 1

	12/31/2019	12/31/2018	12/31/2017
SaaS	*$390.774*	*$273.771*	*$175.762*
Non-SaaS	*$260.036*	*$181.505*	*$138.973*
Subscription Revenue	$650.810	$455.276	$314.735
Product and License Revenue	$583.474	$734.495	$766.777
Support and Services Revenue	$1,776.280	$1,784.132	$1,743.174
Total Revenue	$3,010.564	$2,973.903	$2,824.686

Subscription Revenue is broken into two components. The SaaS portion consists primarily of cloud-hosted solutions. Revenue is generally recognized over the subscription term. Non-SaaS revenue consists of on-premise term licensing, CSP services and related support. Here, revenue is generally recognized upfront. *We note that before 2018, CTXS elected to recognize the revenue from term licenses over the license period, but the mandatory adoption of ASC 606 required the company to more aggressively recognize all term license revenue at the time of sale. This skews any comparison of 2017 results to 2018 and 2019.*

Product and License Revenue consists of revenue from perpetual term licenses which is recognized upfront.

Support and Services Revenue consists mainly of fees from support agreements under perpetual license offerings. These are recognized over the term of the service agreement.

At the end of 2017, CTXS announced it was accelerating its push to a cloud-hosted subscription model and away from perpetual subscriptions. We can see in the table above that the Product License and Support and Services Revenue segments have seen revenue declines which have been essentially offset by gains in the Subscription segment. However, as we will see in the following section, the flat overall revenue growth number is misleading given the difference in revenue recognition policies for each type of revenue.

The company discontinued its perpetual subscription products in the first quarter of 2020 but still offers on-premises term license products.

Impact of the Transition on the Numbers

The shifting of sales to the cloud-hosted subscription services (recognized over time) from term and perpetual licenses (recognized upfront) has had a significant impact on the company's reported results. Under the term and perpetual models, the company receives a larger up-front payment for the software license versus smaller, periodic subscription fees. As the revenue mix shifts to subscriptions, the receipt of cash is deferred. If a customer buys a perpetual license, CTXS will receive a larger sum upfront and recognize it all as revenue at the time of sale. This leads to an immediate boost to both reported revenue and cash flow. Likewise, term licenses typically span multiple years and thanks to ASC 606, these amounts are now recognized upfront as of 2018. However, if the same customer buys a subscription which the company bills annually, CTXS will receive a smaller payment in the first year and recognize that payment to revenue over time. This will lead to a smaller boost to cash flow and a much smaller boost to revenue in the first quarter of the term. However, the hope is that the customer will continue to subscribe over the years and the company will make more over time than it would have under the old model. The company states in its press releases that ***"we expect that average contract duration will increase, as more of our customers transition to the subscription model, which today typically has a 3-year duration and is a reflection of deepening and extending relationships with our customers."***

Annualized Recurring Revenue

We have already seen above that the shift in sales to the subscription model can be seen in the decline in sales of the Product and License and Service and Support segments with an offsetting increase to Subscription revenue. However, the resulting flat sales are not truly indicative of organic revenue growth as the revenue generated by existing perpetual license customers opting for subscription solutions instead will now be recognized to revenue over time rather than upfront. To help adjust for this, CTXS began disclosing Annualized Recurring Revenue (ARR) which the company defines as follows:

> *"[Annualized Recurring Revenue] represents the contracted recurring value of all termed subscriptions normalized to a one-year period.* ***It is calculated at the end of a reporting period by taking each contract's recurring total contract value and dividing by the length of the contract. ARR includes only active contractually committed, fixed subscription fees. All contracts are annualized, including 30-day offerings where we take monthly recurring revenue multiplied by 12 to annualize.*** *ARR may be influenced by seasonality within the year."*

CTXS is quick to point out that ARR is not intended to be a forecast of future revenue. It assumes that all customers with subscription terms less than one year continue to renew for at least the next 12 months. While there may be cases of people trying out subscriptions on a short-term basis who do not renew, we believe this is likely insignificant.

Table 2

	12/31/2019	9/30/2019	6/30/2019	3/31/2019	12/31/2018	9/30/2018	6/30/2018
Subscription ARR	$743	$672	$614	$557	$528	$481	$462
growth	*40.7%*	*39.7%*	*32.9%*				
SaaS ARR	$520	$463	$418	$375	$350	$305	$282
growth	*48.6%*	*51.8%*	*48.2%*				

Subscription ARR includes all subscription revenue such as SaaS and associated service and support contracts. SaaS annualized recurring revenue has been growing in the 50% range for the last three quarters. CTXS touts ARR as a "key performance indicator of the health and trajectory of our business." In the 12/19 quarter, 69% of

total product bookings were for subscription services which was up from 51% a year ago. However, underlying revenues are not growing that rapidly. The growth rate in ARR does not just reflect signing up new customers to subscriptions, but also existing term and perpetual license customers switching over. The company is still very early in switching its installed base over to subscriptions. Consider the following exchange on the 12/19 quarter conference call:

Analyst:

> "Okay. And then, can you give us any sort of an update on where you are on the what was existing installed base of Citrix Workspace in terms of how much is moving or are you seeing any bigger opportunity? Any color on where that on the installed base starting to move over to subscription and cloud?"

David Henshall- CEO

> "Yeah, let me take that one. ***We're early on still. I'd say that number is right around – less than 10% of the installed base. The installed base continues to move because we are still selling perpetual licenses. So, the installed base is growing while we transition. The amount of transition has moved up pretty materially over the last couple of quarters***. Probably most importantly is that we're still yielding the level of uplift that we talked about at our financial analyst meeting while the numbers get bigger. So, I think the opportunity is pretty significant and we'll be doing much more of that throughout 2020."

It is impossible to tell exactly how much of the growth in ARR is driving by customer migration. We reprint table 1 below for ease of reference:

	12/31/2019	12/31/2018	12/31/2017
SaaS	*$390.774*	*$273.771*	*$175.762*
Non-SaaS	*$260.036*	*$181.505*	*$138.973*
Subscription Revenue	$650.810	$455.276	$314.735
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Total Revenue	$3,010.564	$2,973.903	$2,824.686

We see that Product and License Revenue declined by $151 million in 2019 while Support and Services revenue declined by almost $10 million. Management has

indicated that the majority is new business, as in the following comment from the 12/19 quarter conference call:

> *I think if I remember correctly, it [Subscription ARR growth] was 33% growth in Q2, 40% in Q3, 41% in Q4. So, we're actually seeing an acceleration of that as the numbers get bigger.* ***And that's just a reflection of both net new, which is still the majority, as well as migrating more of the installed base going forward."***

Still, migrating existing customers must still be a significant driver of the growth in ARR. It will take a few more quarters to get a clearer picture of where reported revenue growth will settle. However, we note that prior to reporting ARR, the company was reporting an estimated headwind to sales growth caused by the change to subscription sales as being in 700-800 bps range. If the headwind is similar or slightly greater given the acceleration in the shift, it implies a core sales growth in the high single-digit range. As the shift continues over the next several quarters, we will get more visibility into the actual core revenue growth rate.

Deferred Revenue

As we discussed above, the shift in sales to a subscription model is resulting in less revenue being recognized upfront with more being deferred over time. This should be boosting deferred revenue. However, CTXS has always carried a sizeable deferred revenue balance which relates to Support and Services contracts which are also recognized over time. The company's description of deferred revenue from the 10-K states:

> *"Deferred revenue is primarily comprised of Support and services revenue from maintenance fees, which include software and hardware maintenance, technical support related to our perpetual offerings and services revenue related to our consulting contracts. Deferred revenue also includes Subscription revenue from our Content Collaboration and cloud-based subscription offerings."*

In table 3 below, we calculate a deferred revenue days of sales using the SaaS component of subscription revenue and Support and Services segment revenue:

Table 3

	12/31/2019	9/30/2019	6/30/2019	3/31/2019
SaaS Subscription Revenue	$113.000	$101.000	$91.000	$85.000
Support and Services Revenue	$439.584	$441.971	$452.210	$442.515
Total Estimated Revenue Booked Over Time	$552.584	$542.971	$543.210	$527.515
Total Deferred Revenue	$1,795.791	$1,615.572	$1,744.714	$1,756.717
Total Deferred Revenue Days of Sales	299.0	273.7	292.3	299.7

	12/31/2018	9/30/2018	6/30/2018	3/31/2018
SaaS Subscription Revenue	$78.000	$70.800	$64.800	$59.900
Support and Services Revenue	$461.299	$449.985	$439.511	$433.337
Total Estimated Revenue Booked Over Time	$539.299	$520.785	$504.311	$493.237
Total Deferred Revenue	$1,834.572	$1,680.002	$1,723.974	$1,685.184
Total Deferred Revenue Days of Sales	313.0	296.8	311.1	307.5

Despite the shift to more software revenue being recognized over time, the decline in Support and Services revenue more than offset it. The company explained the decline in deferred revenue in the 2019 10-K as follows:

> *"Deferred revenues decreased approximately $38.8 million as of December 31, 2019 compared to December 31, 2018 primarily due to a decrease in maintenance and support of $176.0 million, mostly from Workspace perpetual software maintenance of $66.7 million and Networking perpetual hardware maintenance of $58.9 million, partially offset by an increase from subscription of $146.0 million, mostly due to increased customer adoption of our cloud-based subscription offerings."*

Ordinarily, a software company posting a decline in deferred revenue while subscription revenues were increasing would be an enormous red flag. However, the move away from perpetual maintenance and support is offsetting the increase from subscriptions which makes it difficult to get a clear picture of revenue recognition patterns. This condition is likely to persist for some time as the base of perpetual maintenance contracts bleed off.

Unbilled Revenue

The impact of the shift towards subscription revenue can be seen more clearly in the unbilled revenue balance. The company explains that unbilled revenues primarily

represent future billings under subscription agreements that have not been earned or received and therefore do not show up on the balance sheet. The total of deferred revenue and unbilled revenue represents the total amount of revenue that will eventually be recognized under existing contracts.

The following table shows unbilled revenue for the last eight quarters:

	12/31/2019	9/30/2019	6/30/2019	3/31/2019
Unbilled Revenue	$704.83	$559.43	$484.21	$380.43

	12/31/2018	9/30/2018	6/30/2018	3/31/2018
Unbilled Revenue	$338.46	$243.21	$216.70	$85.30

The company explained in its 10-K that "unbilled revenue increased primarily due to an increase in multi-year subscription agreements as a result of an increase in customer adoption of our cloud-based subscription offerings."

> *"Deferred revenue and unbilled revenue are influenced by several factors, including new business seasonality within the year, the specific timing, size and duration of customer subscription agreements, annual billing cycles of subscription agreements, and invoice timing. Fluctuations in unbilled revenue may not be a reliable indicator of future performance and the related revenue associated with these contractual commitments."*

Cash Flow

As we discussed earlier, customers paid for perpetual licenses and multiyear service contracts upfront whereas a similar customer under a subscription will be billed over time for the service. As the company puts it:

> *"As a result of our subscription model transition, more cash will be collected in future periods as SaaS agreements are billed annually, as opposed to our perpetual business, which is typically billed up-front."*

Thus, a shift away from perpetual licenses will result in a drag on cash flow growth. This can be seen in CTXS's operating cash flow numbers over the last three years:

	12/31/2019	12/31/2018	12/31/2017
T12 Operating Cash Flow	$783.070	$1,035.345	$908.276
T12 Capex	$63.454	$69.354	$80.901
T12 Cash Paid for Licensing, Patents	$3.500	$3.210	$7.379
T12 Free Cash Flow	$716.116	$962.781	$819.996
T12 Dividends	$182.947	$46.799	$0.000
Dividend % of Free Cash	25.5%	4.9%	0.0%
T12 Net Stock Repurchases	$453.853	$1,261.153	$1,174.957
Cash Flow after Buyback	$79.316	-$345.171	-$354.961

This decline is not alarming as cash flow will resume growth in the future when the shift away from lump sum perpetual licenses fades in future quarters. Management addressed this issue in the 12/19 quarter conference call and indicated the headwind to cash flow growth is essentially over:

> *"That absolutely has been a headwind because, a year or two ago, when we talked about the majority of our customers not only were buying perpetual license, but were also buying multi-years of maintenance and paying for that upfront.*
>
> *As we've been unwinding that model to get to a much more pure, just a pure run rate, that's been a tremendous headwind to cash flow. And that's pretty much run its course. We haven't broken it out in a couple of quarters, but it's a very low percentage now versus where it was.* ***So, I think that headwind is pretty much gone at this point."***

It is worth noting here that CTXS initiated a dividend in 2018 and has scaled back its aggressive buyback. This is a mild concern as the reduction in share count has been a huge source of EPS growth in past periods. In fact, in the 12/19 quarter, the company reported a non-GAAP net income *decline* of over 2% (remember the subscription impact) but was able to log non-GAAP EPS *growth* of 2.4%.

Adding Back Stock Compensation to Non-GAAP Results Yields Unrealistic Results

Like many tech companies, CTXS chooses to add back stock-based compensation to its non-GAAP results.

	12/31/2019	9/30/2019	6/30/2019	3/31/2019
Stock-Based Compensation	$60.332	$54.486	$53.973	$51.535
Non-GAAP Net Income	$227.105	$201.456	$161.747	$172.071
% of Non-GAAP Net Income	26.6%	27.0%	33.4%	29.9%

	12/31/2018	9/30/2018	6/30/2018	3/31/2018
Stock-Based Compensation	$46.857	$41.664	$44.117	$28.221
Non-GAAP Net Income	$232.121	$197.435	$178.271	$183.624
% of Non-GAAP Net Income	20.2%	21.1%	24.7%	15.4%

The company gives the following justification for adding back stock option expense:

> *"Although stock-based compensation is an important aspect of the compensation of the Company's employees and executives, stock-based compensation expense is generally fixed at the time of the grant, then amortized over a period of several years after the grant of the stock-based instrument, and generally cannot be changed or influenced by management after the grant.":*

We understand that stock-based compensation expense is a result of amortizing the estimated value of stock options granted in the past. The amount of stock option expense in a given quarter does not perfectly reflect the value enjoyed by employees in that particular quarter. However, the fact remains that if the company had not awarded the options, it would have realistically had to compensate employees with cash. This is particularly true of an established company like CTXS.

The add-back of stock compensation accounts for 15%-more than 30% of non-GAAP net income over the last eight quarters. What's more, it is increasing year-over-year which magnifies the distortion. For perspective, non-GAAP net income declined by 2.1% in the 12/19 quarter, but this decline widens to almost 10% if we subtract stock-based compensation from the non-GAAP figures.

Stock-based compensation also has a meaningful cash flow ramification for the company. Below is the data from the cash flow table above adjusted as if the company had paid the equivalent stock option expense in cash:

Cash flow after dividend and repurchases would have been decidedly negative if the CTXS has paid the stock option expense in cash. This is one more reason to not add

that expense back to non-GAAP earnings figures when assessing profitability and returns.

	12/31/2019	12/31/2018	12/31/2017
T12 Operating Cash Flow	$783.070	$1,035.345	$908.276
T12 Capex	$63.454	$69.354	$80.901
T12 Cash Paid for Licensing, Patents	$3.500	$3.210	$7.379
T12 Free Cash Flow	$716.116	$962.781	$819.996
T12 Dividends	$182.947	$46.799	$0.000
T12 Net Stock Repurchases	$453.853	$1,261.153	$1,174.957
Cash Flow after Buyback	$79.316	-$345.171	-$354.961
Stock-Based Compensation Expense	$278.892	$203.619	$165.120
Adjusted Cash Flow After Dividends and Repo	-$199.576	-$548.790	-$520.081

Explanation of EQ Rating Scale

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.

Disclosure

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