

# Maximizing value when analyzing a technology, media and telecom entity

## 10 steps to help ensure an accurate evaluation

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July 2020

When the term “financial due diligence” is used in the market, what typically comes to mind is a “quality of earnings analysis.” While a quality of earnings analysis is important to understand recurring or operational earnings, there are a number of other meaningful analyses that should be considered.

The technology, media and telecommunications (TMT) space is filled with competition and technological advancement, which requires a higher level of investor education in a fast-paced environment, especially during pandemic conditions.

The following are key analyses and considerations that can give any investor an in-depth look into the key drivers of a business in the TMT industry, providing unique vantage points into the potential upsides and pitfalls of a transaction.

**Revenue analyses:** Is the company appropriately reviewing and analyzing its financial statements in order to maximize the value of its service offerings?

- 1. Revenue recognition:** While it is important to understand a company's cash flow, it can be meaningful to review earnings under U.S. generally accepted accounting principles (GAAP) and Accounting Standards Codification (ASC) 606 (the new revenue recognition standard effective fiscal year 2019), especially in a transaction environment. The intention of ASC 606 is to align revenue recognition with each performance obligation included in a customer agreement. This results in a view of revenue recognition over the related earnings process, which often differs from the timing of cash collections for a TMT business. Determining the appropriate [revenue recognition](#) under ASC 606 can be complicated, difficult to apply and require judgement, but nonetheless, it's important for a prospective buyer to understand how the accounting guidance can affect their future investment and assessment of historical financials.
- 2. Customer retention:** Customer retention analyses assess customer revenue trends over a period of time. Retention analyses can be viewed in a number of ways in order to measure the company's ability to retain customers and its product performance in the market. Based on data quality, customer retention analyses can highlight the financial impact from (i) new and lost customers, (ii) upsells and downsells and (iii) price changes, which will provide the reader with an informed view of how these historical trends affect future performance. The metrics used to calculate customer retention can be, but are not limited to:

- a. Recurring revenue: Revenue that is contractually known and expected to continue in the future.
- b. Annual recurring revenue (ARR): Recurring revenue that is normalized for a single calendar period.
- c. Total contract value (TCV): The value a contract is worth once executed.
- d. Customer billings: The amount a customer is invoiced on a monthly, quarterly or annual basis.
- e. Customer count: Total number of new and lost customers.
- f. Subscriber count: Total number of new and lost subscribers.
- g. User count: Total number of new and lost users.
- h. Logo count: Total number of new and lost logos. A logo would be the entity at the parent level when a company has several subentities as customers.

Below is an example retention calculation we prepared.

### Retention calculation

US\$ in thousands	Fiscal year 1	Fiscal year 2	Fiscal year 3
<b>Beginning customers ARR</b>	<b>\$100,000</b>	<b>\$130,500</b>	<b>\$163,000</b>
New customers ARR	35,000	33,000	31,000
Lost customers ARR	(12,000)	(11,500)	(11,400)
Upsells to existing customers	10,000	14,000	15,500
Downsells to existing customers	(2,500)	(3,000)	(3,400)
<b>Ending customers ARR</b>	<b>\$133,500</b>	<b>\$163,500</b>	<b>\$194,700</b>
<b>Retention rates [based only on lost customers]</b>			
Attrition %	-12.0%	-8.8%	-7.0%
Retention % [inverse of attrition rate]	88.0%	91.2%	93.0%
<b>Net growth [net of new and lost customers]</b>			
Net growth %	23.0%	16.5%	12.0%
<b>Replacement rate</b>			
Replacement % [rate of new to lost customers]	291.7%	287.0%	271.9%
<b>Retention rates [based on lost and downsell]</b>			
Attrition %	-14.5%	-11.1%	-9.1%
Retention % [inverse of attrition rate]	85.5%	88.9%	90.9%
<b>Net growth [based on new, lost, upsells and downsells]</b>			
Net growth %	30.5%	24.9%	19.4%
<b>Replacement rate</b>			
Replacement % [rate of new/upsell to lost/downsell customers]	310.3%	324.1%	314.2%
Replacement % [rate of upsell to downsell customers]	400.0%	466.7%	455.9%
<b>Total retention rate [based on new, lost, upsells and downsells]</b>			
Retention %	130.5%	124.9%	119.4%

Several insights can be derived from the above analysis. Below are a few examples, along with potential follow-up questions for management:

- Declining attrition and increasing retention rate
  - **Beyond the numbers:**
    - How is the company retaining more customers?
    - Is the increase in the retention rate skewed by (a) several sizable customer renewals, (b) provision of discounts or price decreases, or (c) auto-renewal of long-term contracts?
- Declining new growth
  - **Beyond the numbers:**
    - Is the company's product becoming outdated, resulting in a declining number of new customers?
    - Are customers choosing competitors in the market over the company?
    - Are there issues with the sales team or the company's incentive plans?

- Replacement percentage increases from fiscal year 1 to fiscal year 2, but declines from fiscal year 2 to fiscal year 3

– **Beyond the numbers:**

- How was the company able to increase upsells from fiscal year 1 to fiscal year 2? Were there price increases or cross-selling of services?
- What is causing the increase in downsells in the historical period? Were there price decreases or termination of certain services?

While the analysis above is based on a consolidated view of customers, it may be meaningful to further review the data from the cohort (group) level, as this may identify trends and behaviors within customer segments.

Customer retention is considered a benchmark analysis for a company with a recurring revenue or subscription model. In a transaction, prospective buyers may value a customer retention analysis more than revenue and EBITDA analyses, making it a critical metric in their investment decision.

**3. Contracted backlog and estimated pipeline:** Backlog and pipeline analyses can provide meaningful insights for forecasting and modeling purposes.

- a.** A backlog analysis presents contracted project revenue from (a) any in-process projects with remaining value; and (b) contracted projects that have not yet started. Given revenue is contracted, but not yet serviced, a prospective buyer may consider it as value they are receiving when purchasing the target. The reliability of the backlog financial terms is typically reviewed during financial due diligence, including the future contracted value, timing and potential termination clauses. Additionally, historical backlog trends are reviewed for insight into future trends. For example, a declining backlog trend may highlight potential revenue decreases that are not apparent in reported financials. The example below presents a backlog analysis performed during buy-side diligence.

**Contracted backlog**

LOB	Total contracted backlog	Projected year of revenue recognition		
		Fiscal year 4	Fiscal year 5	Fiscal year 6
Professional services	\$ 28,650,000	\$ 17,900,000	\$ 6,250,000	\$ 4,500,000
SaaS	12,900,000	7,750,000	2,900,000	2,250,000
Add-ons	6,400,000	2,000,000	2,200,000	2,200,000
Managed services	2,987,000	1,300,000	850,000	837,000
<b>Contracted backlog</b>	<b>\$ 50,937,000</b>	<b>\$ 28,950,000</b>	<b>\$ 12,200,000</b>	<b>\$ 9,787,000</b>

- b.** A pipeline analysis presents estimated project revenue, which is not contractually final and is likely (a) still in negotiations or (b) is prospective based on initial talks between the target and the customer. During financial due diligence, the reliability of the pipeline is examined by understanding historical pipeline conversion rates, which are measured by understanding the sales cycle and the average time between initial discussions and contract execution. Additionally, it's important to understand the pipeline's velocity from initiation to close. The example below is based on a pipeline analysis we performed.

**Estimated pipeline**

LOB	Total contracted value (TCV)	Conversion rate (1)	TCV* probability factor	TCV* probability factor by year		
				Projected year of revenue recognition		
				Fiscal year 4	Fiscal year 5	Fiscal year 6
Verbally won	\$ 57,000,000	73%	\$ 41,610,000	\$ 18,250,000	\$ 13,140,000	\$ 10,220,000
Proposal	77,350,000	47%	36,354,500	20,680,000	\$ 8,695,000	\$ 6,979,500
Initial meeting	21,975,000	4%	944,925	537,500	\$ 225,750	\$ 181,675
<b>Estimated pipeline</b>	<b>\$ 156,325,000</b>		<b>\$ 78,909,425</b>	<b>\$ 39,467,500</b>	<b>\$ 22,060,750</b>	<b>\$ 17,381,175</b>

(1) Conversion rate is based on the company's conversion rates from Fiscal year 1, Fiscal year 2 and Fiscal year 3

The combination of customer retention, contracted backlog and estimated pipeline analyses can provide meaningful insight into a company's revenue forecasting and financial modeling. A prospective buyer can produce the foundation for forecast revenue post-transaction by summarizing the following: (a) historical reported revenue multiplied by an estimated customer retention rate, (b) known contracted revenue in the backlog, and (c) estimated revenue in the pipeline.

- 4. Customer concentration:** The tracking of how earnings are derived, and from whom, can provide meaningful insights into a company's customers, including: (a) understanding customer concentration risks and the potential impact from customer departures, (b) understanding commonalities in sales between the larger customers for upsell potential and marketing efforts, and (c) understanding opportunities for customer revenue diversification. If customer concentration exists, it is often worthwhile to perform a contract analysis and customer due diligence, so a prospective buyer can better understand the level of risk (if any) associated with the existing customer base.
- 5. Lifetime value (LTV):** An LTV analysis presents the total estimated revenue expected from a customer based on historical reported customer revenue and the estimated customer life span. A customer's LTV can be a key metric for a growing TMT company and can assist management in making strategic business decisions. A successful company wants to illustrate consistent increases in customer LTVs, which could potentially add credibility to its customer retention and customer satisfaction metrics. Refer to the customer acquisition costs section below for further information on LTV.

**Cost analyses:** Is the company maximizing its profit potential and managing costs effectively and efficiently?

- 6. Gross profit analyses:** Gross profit equals revenue minus costs to service the revenue. While the definition sounds simple, in practice, companies tend to define gross profit differently and, at times, incorrectly.

Some common definitional issues that arise when calculating gross profit include the exclusion of (i) salaries for individuals who implement the product or service offering, or provide customer support, (ii) hosting provider costs, (iii) telecommunication costs, and (iv) hardware costs (if applicable). For gross profit analyses to be beneficial, management should incorporate all costs which directly relate to servicing revenue. By doing so, management can better understand (a) what the notable cost drivers are; and (b) how best to improve gross profit. Additionally, understanding the variable and fixed nature of these cost drivers can further assist in establishing operational efficiency.

It is often beneficial to analyze gross profit based on service offering or product type. This analysis may result in strategic decisions such as changing the company's service or product mix. The simple example below illustrates the impact a detailed view of gross profit can have on a company's strategy.

#### Management's current view of gross profit

US\$ in thousands	LTM	
<b>Revenue as reported</b>	\$	<b>1,550</b>
<b>Cost of revenue</b>		
Hardware		(500)
Implementation salaries		(300)
Support salaries		(50)
Hosting		(75)
<b>Total cost of revenue, as reported</b>		<b>(925)</b>
<b>Gross profit</b>		<b>625</b>
<b>Gross profit %</b>		<b>40.3%</b>

## Detailed view of gross profit

US\$ in thousands	LTM			
	Hardware	Subscription	Implementation	Total
Revenue as reported	\$ 400	\$ 600	\$ 550	\$ 1,550
<b>Cost of revenue</b>				
Hardware	(500)	-	-	(500)
Implementation salaries	-	-	(300)	(300)
Supporting salaries	-	(50)	-	(50)
Hosting	-	(75)	-	(75)
<b>Total cost of revenue, as reported</b>	<b>(500)</b>	<b>(125)</b>	<b>(300)</b>	<b>(925)</b>
<b>Gross profit</b>	<b>(100)</b>	<b>475</b>	<b>250</b>	<b>625</b>
<b>Gross profit %</b>	<b>-25.0%</b>	<b>79.2%</b>	<b>45.5%</b>	<b>40.4%</b>

As shown in the gross profit analysis above, the company's hardware sales are not profitable. As such, management may determine there is a strategic benefit in outsourcing the hardware sales; however, this conclusion may not have been easily determined when analyzing gross profit overall. A prospective buyer may want to understand the company's gross profit profile to: (a) appropriately model the financial statements, including understanding fixed versus variable costs; (b) negotiate the treatment of deferred revenue; or (c) calculate an earnout in a purchase agreement.

- Utilization rates:** Utilization rate is defined as the amount of time employees spend on client-facing or billable assignments as a percentage of their total available time at work or employee plan hours. A significant amount of TMT companies have a professional services component included in their business model. For these companies, utilization rates can provide meaningful insights into the company's operational efficiencies and management of employee costs (including overtime). Utilization rates can help a prospective buyer understand post-transaction hiring needs.
- Customer acquisition costs (CACs):** CACs are costs associated with acquiring and monetizing a customer. Selecting appropriate costs for a CAC calculation requires judgement; however, common costs include: (a) marketing and advertising costs (e.g., social media, trade show, website expenditures, direct and other marketing materials, etc.); (b) sales and customer support teams' compensation associated with time spent on servicing the customer; (c) commission and referral fees; and (d) market and customer research costs.

Once the CACs are determined (as presented in line B of the example below), the total can be compared to estimated LTV (as presented in line A below) to approximate profitability of past and prospective customers. Additionally, the company should consider the estimated customer lifetime cost to service the customer (C below) as part of this analysis. Reviewing the total CAC and customer lifetime costs to service (as noted in lines B and C below) compared to the LTV of a customer (A below) illustrates the profitability of the company's business model. If lifetime costs to acquire and service a customer are greater than the lifetime value of the customer (Company 2 below), the company's value proposition for investors may be inadequate.

## LTV and CAC analysis

US\$ in thousands	Company 1	Company 2
<b>Estimated customer LTV [A]</b>	\$ 675	\$ 675
<b>Customer acquisition costs (CAC):</b>		
Commission	(75)	(75)
Marketing	(100)	(300)
Salaries	(200)	(400)
<b>Total CAC [B]</b>	<b>(375)</b>	<b>(775)</b>
<b>Estimated customer lifetime cost to service [C]</b>	<b>(100)</b>	<b>(100)</b>
<b>Estimated net value [A + B + C = D]</b>	<b>200</b>	<b>(200)</b>
<b>Estimated net value percentage [D/A]</b>	<b>-29.6%</b>	<b>-29.6%</b>

CACs can help determine optimal pricing of a product or service and the scalability of a company. At a minimum, the potential earnings from a customer should be covering the CACs and the expected cost to service the customer. In the example below, the average cost to acquire a new customer in fiscal year 2019 was \$31,000. The company should ensure the customer earnings after cost to service can recoup these costs within a reasonable timeframe (CAC recovery time).

CAC per customer analysis		
US\$ in thousands		LTM
<b>Customer acquisition costs (CAC):</b>		
Commission		(75)
Marketing		(100)
Salaries		(200)
<b>Total customer acquisition costs [A]</b>		<b>(375)</b>
<b>Customers acquired in LTM [B]</b>	\$	<b>12</b>
<b>Average CAC per new customer [A/B]</b>	\$	<b>(31)</b>

The above examples depict how CAC can help evaluate a TMT company. Both examples can assist a company with understanding strategic focuses within a customer segmentation or whether profitability thresholds are met when acquiring customers. There are other CAC analyses a company can complete; however, at a minimum, management or a prospective buyer should ensure they are (a) measuring these costs, and (b) the monetization and lifetime value of a customer are greater than these costs.

- 9. Software development costs:** When a TMT company has internal-use software (SaaS or external-use software (on-premise software) offerings, they face the challenge of determining which costs should be expensed versus capitalized.

While the capitalization rules differ between internal-use and external-use software, tracking the supporting information is critical in either case. For the cost to qualify for capitalization, management or a prospective buyer should ensure the employee hours or contractor costs are recorded within a time tracking system and are tracked by: (a) period of service, (b) project and (c) phase (e.g., design, implementation, etc.).

It's important to understand the projects and time allocation of these expenditures beyond the U.S. GAAP treatment when evaluating a TMT company. The objective of capitalizing software development costs is to match these expenses to the related period of benefit, which is typically in the future. The concept is similar to a fixed-asset purchase by a manufacturing company. The capitalization of software development costs represents a realignment of costs to match a prospective future value.

In order for this accounting to be effective in its intended purpose, there should be an expectation for tangible incremental value and earnings to be received as a result of these costs. Management, or a prospective buyer, should evaluate software development costs consistent with this thought process and consider preparing a free cash-flow analysis.

*Note: Capitalized costs are amortized, resulting in the removal of these costs from definitional EBITDA. These costs represent cash flow of the company and should be considered as true cash costs for modeling purposes.*

- 10. SaaS Rule of 40:** The Rule of 40 is an index to measure efficiency and growth for SaaS companies. The formula behind the Rule of 40 calculates the revenue growth rate plus EBITDA percentage, with the sum of these two ideally being equal to or greater than 40%. If the sum of the percentages is lower, primarily due to low EBITDA percentage, it would indicate the company is spending more than the return on, or growth of, its revenue. If the sum of the percentages is lower, primarily due to low growth rate, it draws question to the product's ability to scale. Applying the Rule of 40 can help a prospective buyer understand the growth and profitability potential of a company and provide an index for valuations.

While the importance and value of each of these analyses will be dependent on the target's profile, each of these analyses should be contemplated in any proposed TMT transaction. Further, they can assist with calculating the company's return on investment (ROI), or the net benefit or gain over the related cost. However, each company and

transaction varies and consideration should be given to unique analyses, including cash flow management through the COVID-19 crisis that can be performed during diligence to better understand ROI.

Results and insights derived from these analyses can significantly affect stakeholder views of a company. It's important to understand the story behind the results produced, including the "who," "what," "why," "when" and lastly, the "how," in order to gain insight into a company and its management. There is an art to preparing analyses that obtain answers to each of these questions, and it goes beyond the mechanics of the calculation. During a transaction, these analyses can assist buy-side clients evaluate a prospective target, and sell-side clients validate the company's narrative. Post-transaction, these analyses can provide a base for management reporting packages.

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