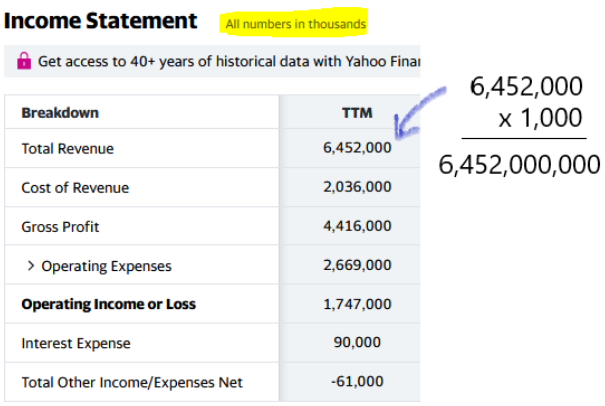
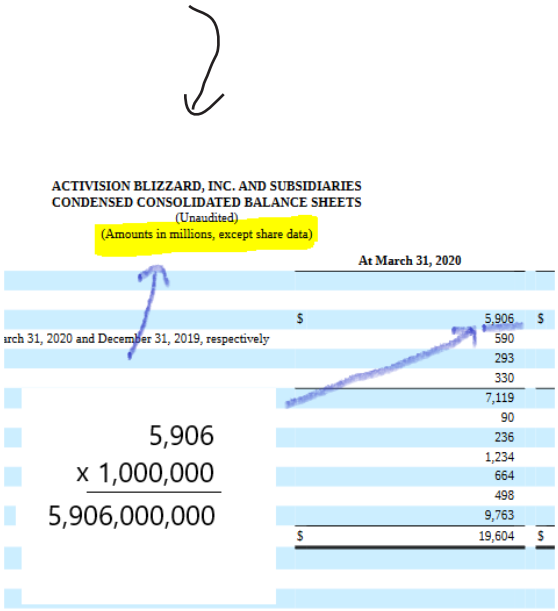
Calculating A Company's Leverage and ROE

Disclaimer for those who are new to reading financial statements:

For those of you who are new to investing, keep in mind that the numbers you see on the screenshot are in thousands, meaning that “6,452,000 (6.4 million),” is actually 6,452,000,000 (6.4 billion). Numbers in thousands just means to take the number you see on screen e.g. “6,452,000” and multiply it by 1,000. Same thing goes for numbers in millions just that instead of multiplying by 1,000, you multiply by 1,000,000. The reason for this, generally, is to just show the more important digits and to make the numbers easier to readdue to how big these numbers are because of how much money these companies aremaking.Financial statements will generally tell you whether the numbers are in thousands or in millions, like so:





When you're going to invest in a company, it's always a really good idea to understand the risks of that specific business. leverage helps us understand what the level of risk a company has due to their level of borrowing money from lenders, i.e. taking out debt. In a lot of cases, companies will take out debt in order to not use stockholder's equity. The reason for this is because it keeps the company from having to bring in more shareholders, and by avoiding this, the current shareholders get a bigger piece of the pie because there's more profits to be split amongst less people. So essentially, it's useful to boost a company's ROE, which is profit left over for the shareholder. The purchase of assets can really only be funded in two different ways, using stockholder's equity or borrowing money from lenders. So using leverage can actually be a good thing if you're a shareholder, but too much leverage is bad news, especially if that business cannot afford to pay the interest on that borrowing. Leverage can be measured by using the asset to equity ratio, which is found by using the following formula:

Total Assets / Total Equity = Asset to Equity

Consider the accounting equation

Assets = Liabilities + equity

200 = 100 + 100

Asset to equity ratio = 200%

Considering this formula, then a normal asset to equity ratio would be 200% because assets would be funded by liabilities and equity evenly. However, this isn't always the case. Some companies choose to fund the majority of their assets with stockholder's equity and some would rather borrow more money to fund the purchase of their assets. Let's continue using the example of ATVI for this one. So ATVi is one of those companies who actually funds the majority of their assets using stockholder's equity rather than borrowing more money, which does decrease their level of risk, but it also takes away from ROE.

Finding Leverage and ROE for ATVI

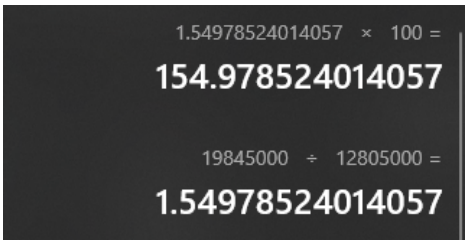
Breakdown	12/31/2019	12/31/2018	12/31/2017	12/31/2016
Assets	19,845,000	17,835,000	18,668,000	17,452,000
Current Assets	7,292,000	6,106,000	6,520,000	4,830,000
Non-current assets	12,553,000	11,729,000	12,148,000	12,622,000
Total Assets	19,845,000	17,835,000	18,668,000	17,452,000
Liabilities and stockholders' eq...	19,845,000	17,835,000	18,668,000	17,452,000
Liabilities	7,040,000	6,478,000	9,206,000	8,333,000
Current Liabilities	2,915,000	2,642,000	3,663,000	2,656,000
Non-current liabilities	4,125,000	3,836,000	5,543,000	5,677,000
Long Term Debt	2,675,000	2,671,000	4,390,000	4,887,000
Deferred taxes liabilities	505,000	18,000	21,000	44,000
Other long-term liabilities	945,000	1,147,000	1,132,000	746,000
Total non-current liabilities	4,125,000	3,836,000	5,543,000	5,677,000
Total Liabilities	7,040,000	6,478,000	9,206,000	8,333,000
Stockholders' Equity	12,805,000	11,357,000	9,462,000	9,119,000
Common Stock	0	0	0	0
Retained Earnings	7,813,000	6,558,000	4,916,000	4,869,000
Accumulated other comprehe...	-619,000	-601,000	-638,000	-629,000
Total stockholders' equity	12,805,000	11,357,000	9,462,000	9,119,000
Total liabilities and stockholde...	19,845,000	17,835,000	18,668,000	17,452,000

Assets = Liabilities + Equity

19,845,000 = 7,040,000 + 12,805,000

Total Assets / Total Equity = Assets to Equity Ratio

19,845,000 / 12,805,000 = 154.98%



In the case of ATVI, they seem to be funding the majority of their assets with stockholder's equity. Again, a normal percentage would be 200%. So ATVI has a lot less risk exposure from their debt than normal. There might be some companies that take out a lot of debt, and typically if I'm looking into a company like this, I'll pay closer attention to that company, their debt levels, ICR (which we'll talk about in a moment), and their balance sheet strength, such how much cash on hand do they have to be able to pay off that debt. But just there are companies out there with higher leverage, but make more than enough money to pay for the interest on their borrowing. You can easily find if a company is able to afford their levels of borrowing by find their interest coverage ratio (ICR).

Finding Interest Coverage Ratio (ICR)

Interest coverage ratio helps us find out how well a company is able to pay off the interest on their debt. This is found by finding their earnings before interest and taxes (EBIT), then dividing that by their interest expense.

Finding EBIT

Net Income + Income Tax Expense + Interest Expense

1,561,000 + 109,000 + 90,000 = 1,760,000

Finding ICR

EBIT / Interest Expense = ICR

1,760,000 / 90,000 = 19.55 = 19.6

ATVI's ICR came in at 19.6, which beats the benchmark of 3.0. A 3.0 ICR would mean that a company is able to afford the payment of the interest on the money that they borrow. So ATVI's 19.6 shows us that they have absolutely no problem in being able to afford the payments they must make to lenders. This comes as no surprise though, because as we found earlier, it's not like they're borrowing insane amounts of money anyway. But again, there are companies with much higher levels of leverage, that are in fact able to afford it. My only issue with that, however, is what about recession scenarios? What about times when sales slow down drastically for some other reason? Companies must be prepared, that's why if you're investing in a company with higher levels or leverage, you must keep a close eye on it and its levels of borrowing. As well as, are they able to afford it and do they have a strong enough balance sheet, with enough cash on hand to be able to pay off that debt in rough economic times, such as recession scenario. Or that at the very least, they have the capability to raise enough cash to pay for that debt.

So there you go! The process of finding good companies doesn't involve overly fancy mathimatical formulas, just basic subtraction, addition, multiplication, and division. Investing doesn't need to be some overly complicated mathimatical mess. Some basic math takes you a long way.