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META LESSON 2: ACCOUNTING INCONSISTENCIES AND CONSEQUENCES

Apples to Oranges…

The Lead in

- In my last post, I used Facebook's recent troubles to talk about the importance of corporate governance, and how we, as investors, have abandoned the power to change management at many younger tech companies in return for being able to invest in young tech companies, with growth potential and well-regarded founders.
- In this post, I will revisit Facebook's most recent earnings report, and argue that while it contained disappointing news on growth and profitability, the bad news was exaggerated by systematic inconsistencies in how accountants categorize expenses
- These inconsistencies skew earnings and invested capital down in firms that don't fit the accounting prototype. That skewing can affect valuation and pricing judgments about these firms, and correcting accounting inconsistencies is a key step towards leveling the playing field.

Accounting 101: The Three Big Questions (that accounting should answer)

1. What does a business own? List out the assets that a business has invested in, and how much it spent on those investments and perhaps what these assets are worth today.
2. What does the business owe? Specify the contractual commitments that a business has to meet, to stay in business. Simply put, this should include all borrowings, but is not restricted to those
3. How much money did the business make? Measure the profitability of the business, both with accounting judgments on expenses, and based upon cash in and cash out, over the period of measurement (quarter, year).

The Financial Statements

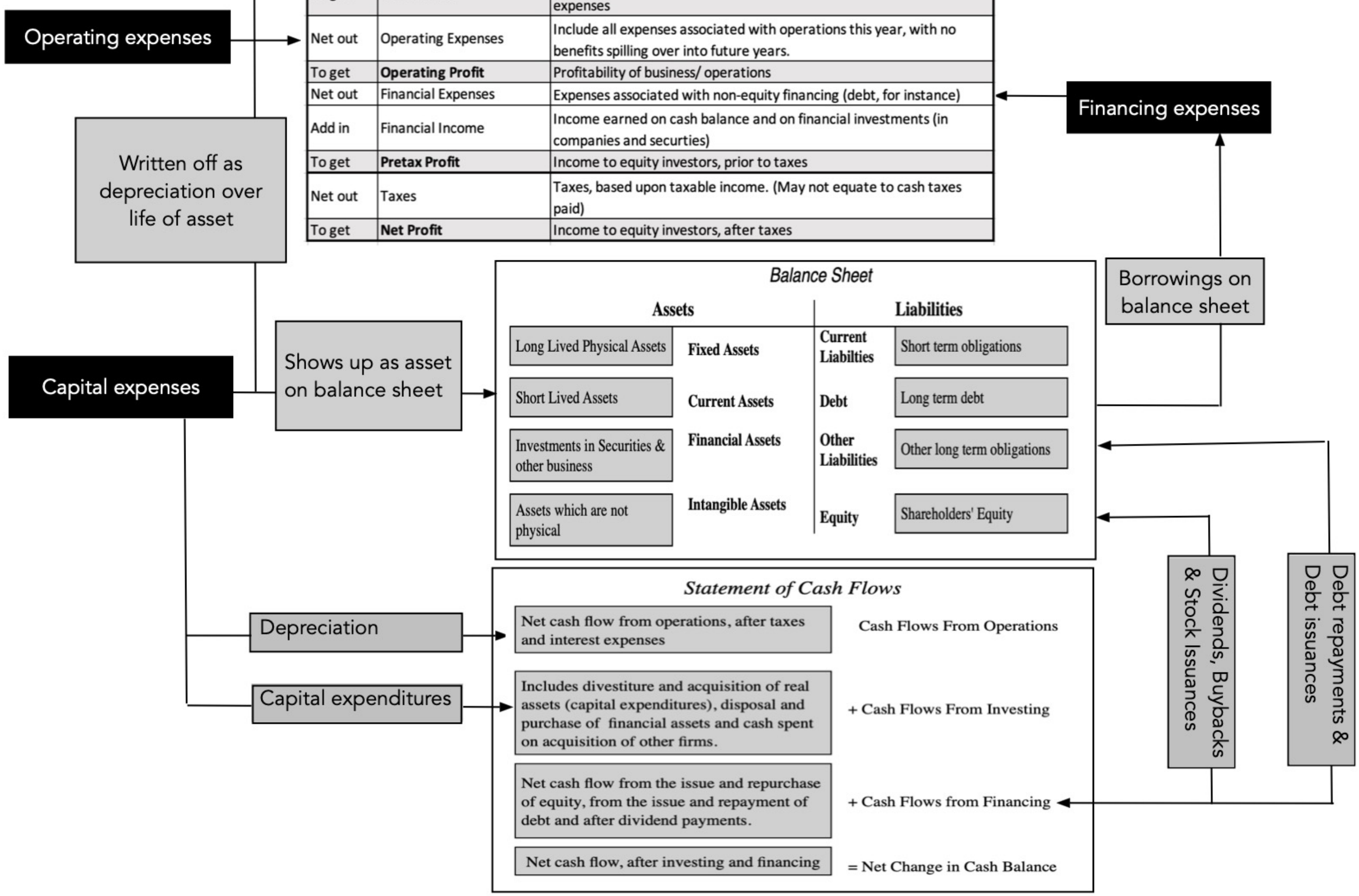
- *The balance sheet*, which summarizes what a firm owns and owes at a point in time, as well as an estimate of what equity is worth (through accounting eyes).
- *The income statement*, which reports on how much a business earned in the period of analysis, while providing detail on revenues and expenses.
- *The statement of cash flows*, which reports on cash inflows and outflows to the firm during the period of analysis and allows for a measure of cash earnings (as opposed to accounting earnings) and cash flows.

Accounting Expense Categories

- *Operating expenses* are expenses associated with generating the revenues reported by a business during a period. Thus, it includes not only the direct costs of producing the product or service the firm sells, but also other expenses associated with operations, including S, G & A expenses and marketing costs.
- *Financing expenses* are expenses associated with the use of non-equity financing, and in most firms, it takes the form of interest expenses on debt, short term and long term.
- *Capital expenses* are expenses that provide benefits over many years. For a manufacturing company, these can take the form of plant and equipment. For non-manufacturing companies, they can take on less conventional and tangible forms (and as well argue in the next section, accounting has never been good at dealing with these).

Income Statement

	Item	Explanation
Start with	Revenues	Accountant's estimate of the revenues/sales generated by any transactions made the business during the period.
Net out	Cost of Goods Sold	Estimated costs that are directly associated with producing the product/service sold by the company.
To get	**Gross Profit**	Unit profitability, before covering other indirect costs and financial expenses
Net out	Operating Expenses	Include all expenses associated with operations this year, with no benefits spilling over into future years.
To get	**Operating Profit**	Profitability of business/ operations
Net out	Financial Expenses	Expenses associated with non-equity financing (debt, for instance)
Add in	Financial Income	Income earned on cash balance and on financial investments (in companies and securties)
To get	**Pretax Profit**	Income to equity investors, prior to taxes
Net out	Taxes	Taxes, based upon taxable income. (May not equate to cash taxes paid)
To get	**Net Profit**	Income to equity investors, after taxes



Miscategorized Financing Expenses as Operating Expenses

To correct the accounting mistake

To correct operating (net) income: Stated Operating income + Current year's Lease expense - Amortization of Lease Asset

To correct financial expenses: Stated interest expense + imputed interest expense on lease debt

Amortize the lease asset over the commitment lifetime.

To correct debt & assets: Take the present value of future financing commitments, using the cost of debt as your discount and show as both an asset (lease asset) and debt (lease debt).

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Balance Sheet

Assets		**Liabilities**	
Long Lived Physical Assets	**Fixed Assets**	**Current Liabilties**	Short term obligations
Short Lived Assets	**Current Assets**	**Debt**	Long term debt
Investments in Securities & other business	**Financial Assets**	**Other Liabilities**	Other long term obligations
Assets which are not physical	**Intangible Assets**	**Equity**	Shareholders' Equity

When accountants treat a financing expense (like lease payment) as an operating expense.

Operating income will be misstated, with financing expenses showing up as operating expenses. Net income will be unaffected.

Book debt and assets will be understated, as you miss the present value of commitments associated with the financing on both sides of the balance sheet.

Effects on Ratios/Statistics

Ratio/Statistic	*Before correction*	*After correction*	*Effect of correction*
Operating Margin	Operating income/Sales	Corrected Operating income/Sales	Increase
Net Margin	Net Income/Sales	Net Income/Sales	No change
Return on invested capital	Operating income/ (Book value of equity + Book value of debt - cash)	Corrected Operating income/ (Book value of equity + Book value of debt + Lease debt - cash)	Decrease
Return on equity	Net Income/Book Equity	Net Income/ Book Equity	No change
Debt Ratio (Book)	Book Debt/(Book Debt + Book Equity)	(Book Debt + Lease Debt)/ (Book Debt + Lease Debt + Equity)	Increase
Debt Ratio (Market)	Mkt Debt/(Mkt Debt + Mkt Equity)	(Mkt Debt + Lease Debt)/ (Mkt Debt + Lease Debt + Mkt Equity)	Increase

Accounting Inconsistency: Treating Financing Expense as Operating Expense

- Treating a financing expense as an operating expense has no effect on net income, but its effects will ripple through elsewhere affecting operating income (usually lowering it) and understating the borrowing on the balance sheet.
- Until accountants came to their senses in 2019, they routinely treated a large segment of leases as debt, with questionable reasons, and skewed operating margins, returns on capital and debt ratios in lease-heavy sectors like retailing and restaurants.
- Leases are only one of many other contractual commitments that meet the "debt" criteria and require similar corrections. Thus, the content commitments at Netflix, representing contractual commitments on content that Netflix has obtained rights to, from other studios, as well as some purchase commitments at companies may require the same corrective treatment as leases.

Miscategorized Capital Expenses as Operating Expenses

To correct the accounting mistake

To correct operating (net) income: Stated Operating (Net) income + Current year's R&D expense - Amortization of R&D Asset

Amortize the R&D asset over amortizable life.

To correct debt & assets: Capitalize past R&D expenses and incorporate that amount into assets (as an R&D asset) and increase book equity by an equal amount.

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Investments in Securities & other business	Financial Assets	Other Liabilities	Other long term obligations
Assets which are not physical	Intangible Assets	Equity	Shareholders' Equity

When accountants treat a capital expenditure (like R&D) as an operating expense.

Operating income and net income will be misstated and will be too low (high) for companies with growing (declining) R&D expenses.

Book equity and assets will be understated, as you miss the capitalized effects of past R&D expenses in both items.

Effects on Ratios/Statistics

Ratio/Statistic	*Before correction*	*After correction*	*Effect of correction*
Operating Margin	Operating income/Sales	Corrected Operating income/Sales	Increase (decrease) for companies with rising R&D expenses.
Net Margin	Net Income/Sales	Corrected Net Income/Sales	Increase (decrease) for companies with rising R&D expenses.
Return on invested capital	Operating income/ (Book value of equity + Book value of debt - cash)	Corrected Operating income/ (Book value of equity + R&D asset + Book value of debt - cash)	Decrease
Return on equity	Net Income/Book Equity	Corrected Net Income/ (Book Equity + R&D asset)	Decrease
Debt Ratio (Book)	Book Debt/(Book Debt + Book Equity)	Book Debt / (Book Debt + Equity + R&D assset)	Decrease
Debt Ratio (Market)	Mkt Debt/(Mkt Debt + Mkt Equity)	Mkt Debt/(Mkt Debt + Mkt Equity)	No change (The market value already incorporates R&D)

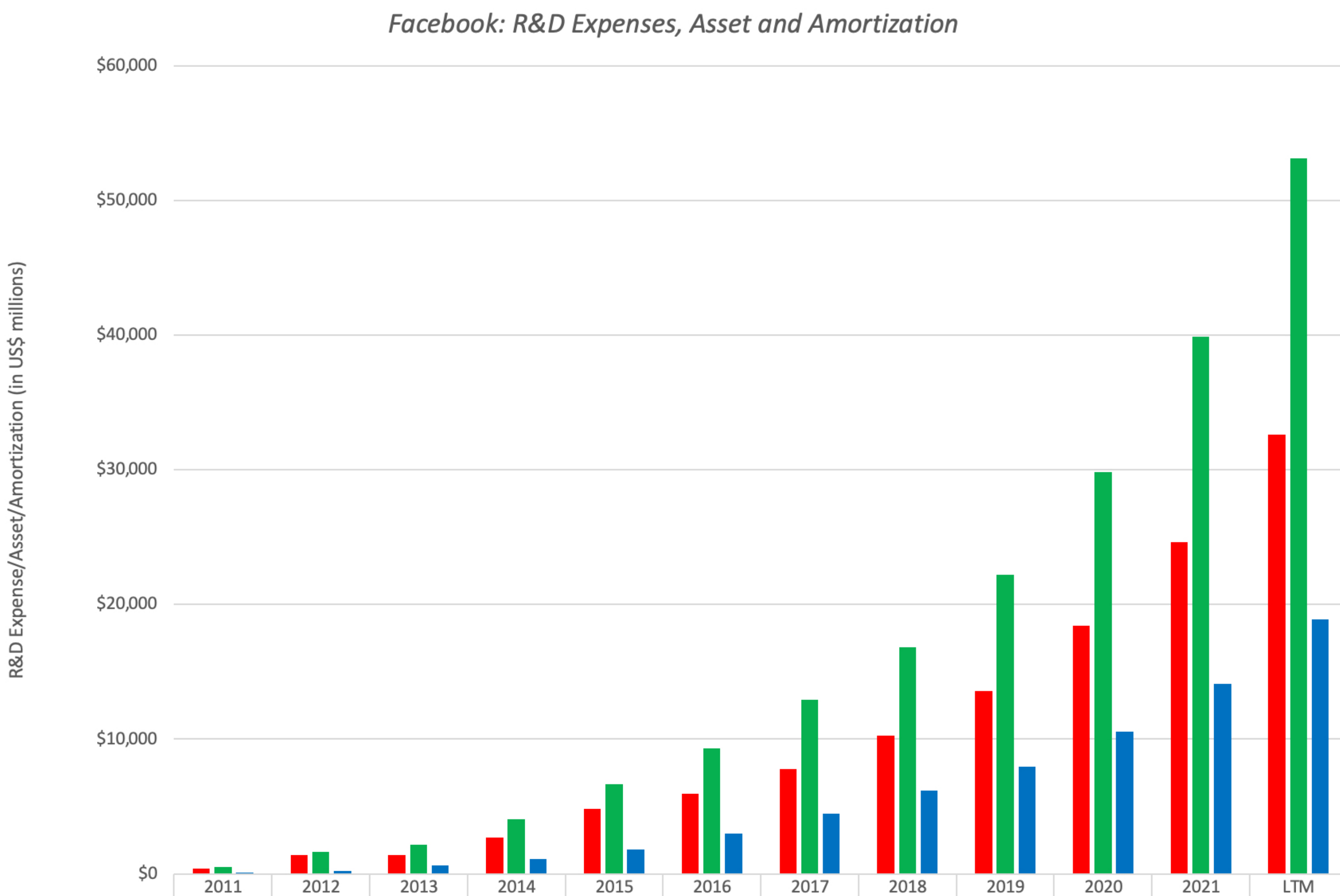
Extending beyond R&D…

1. *Exploration costs* at natural resource companies, since even if successful, the reserves found will not add to revenues or income until years into the future.
2. *Advertising expenses to build brand name* at consumer product companies, and especially so at companies (like Coca Cola) that are dependent on brand name for both growth and pricing power. Note that not all business advertising is for building brand name, and capitalizing brand-name advertising will require separating advertising expenses into portions intended to sustain and increase current sales (operating expense) and for building brand name (capital expense).
3. *Use/Subscriber acquisition costs* at user or subscriber-based firms, at companies that have built their value propositions around user or subscriber numbers. Note that the capitalization effect will depend on how long an acquired subscriber or user will stay with the business, with longer customer lives creating a bigger impact, from correction.
4. *Employee recruiting and training expenses* at consulting and human-capital driven firms, since their growth depends, in large part, on their employee quality and retention. Here again, the effect of capitalizing employee-related expenses will depend on employee tenure, with longer tenure creating a bigger effect, when the correction is made.

Pricing and Investment Consequences

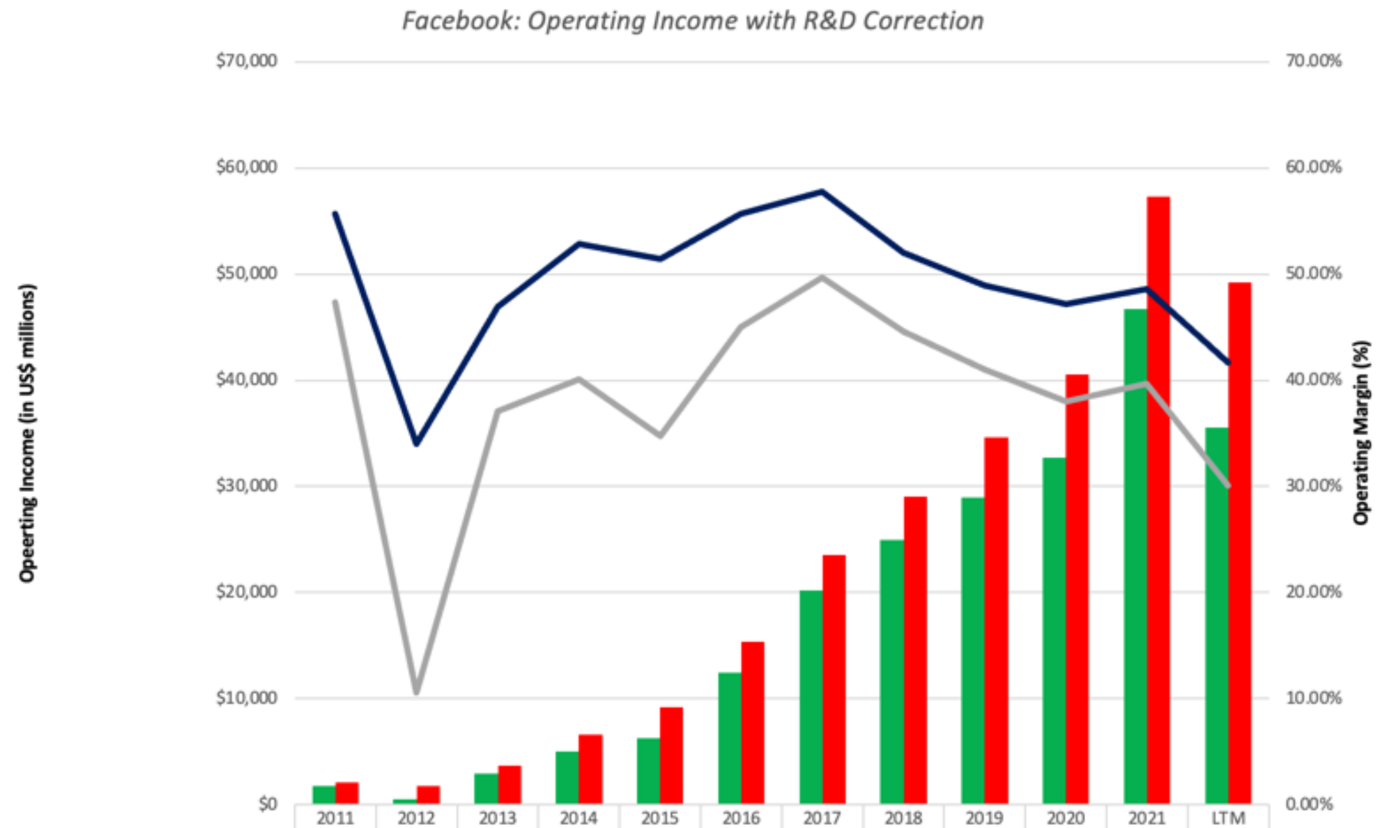
	Operating -> Financing (like leases)	*Operating -> Capital (like R&D)*
Valuing Equity	Since free cash flows to equity are after both financing and operating expenses, they should thus be unaffected, but the cost of equity may have to change to incorporate the adjusted debt ratios. The overall effect on equity will depend on the cost of equity correction.	Base year free cash flows to equity and firm will be unaffected, since they are after both operating and capital expenses, but there will be shifts in profitability and reinvestment numbers, which will affect future growth and estimated value. At most firms, profitability and reinvestment measures will increase, but the net effect on value of these changes will depend on the return spread (ROIC minus Cost of Capital, ROE minus Cost of Equity) that you estimate for the firm, after correcting ROIC and ROE.
Valuing Firm or Business	Correction will affect free cash flows to the firm, since it is a pre-debt cash flow, increasing it, for most firms, and your estimate of how much financial leverage is being carried, with an increase sometimes lowering and sometimes raising your cost of capital. While these changes will generally push the business value up, you will be netting out a larger debt figure, leading to equity values going up, down or staying relatively unchanged.	
Pricing Equity	Net income and book equity are unaffected by this correction, which should imply that equity multiples based upon these scalars (PE, Price to Book) will be unaffected as well. When comparing across companies, though, the adjustment to debt ratios might play a role in risk comparisons across companies.	Changes to net income and book equity will ensue, with price earnings and price to book ratios declining at firms with growing R&D expenses.
Pricing Firm or Business	Enterprise value (EV) multiple will be changed, as enterprise value will rise with the addition of lease debt and EBITDA or Invested Capital, if used as a scalar, will also rise as the correction is made.	Changes to operating income, EBITDA and invested capital will ensue, generally pushing down EV multiples at firms with growing R&D expenses.
Story for business	The correction can sometimes change the story that you are telling for a company, as you restate return and cost of capital (shifting your excess returns) and risk, with leases treated as debt	When comparing companies using a pricing multiple, ranking and pricing judgments on firms will be altered by capitalization, pushing up the ranking of firms with growing R&D expenses.

Facebook: The R&D Spending



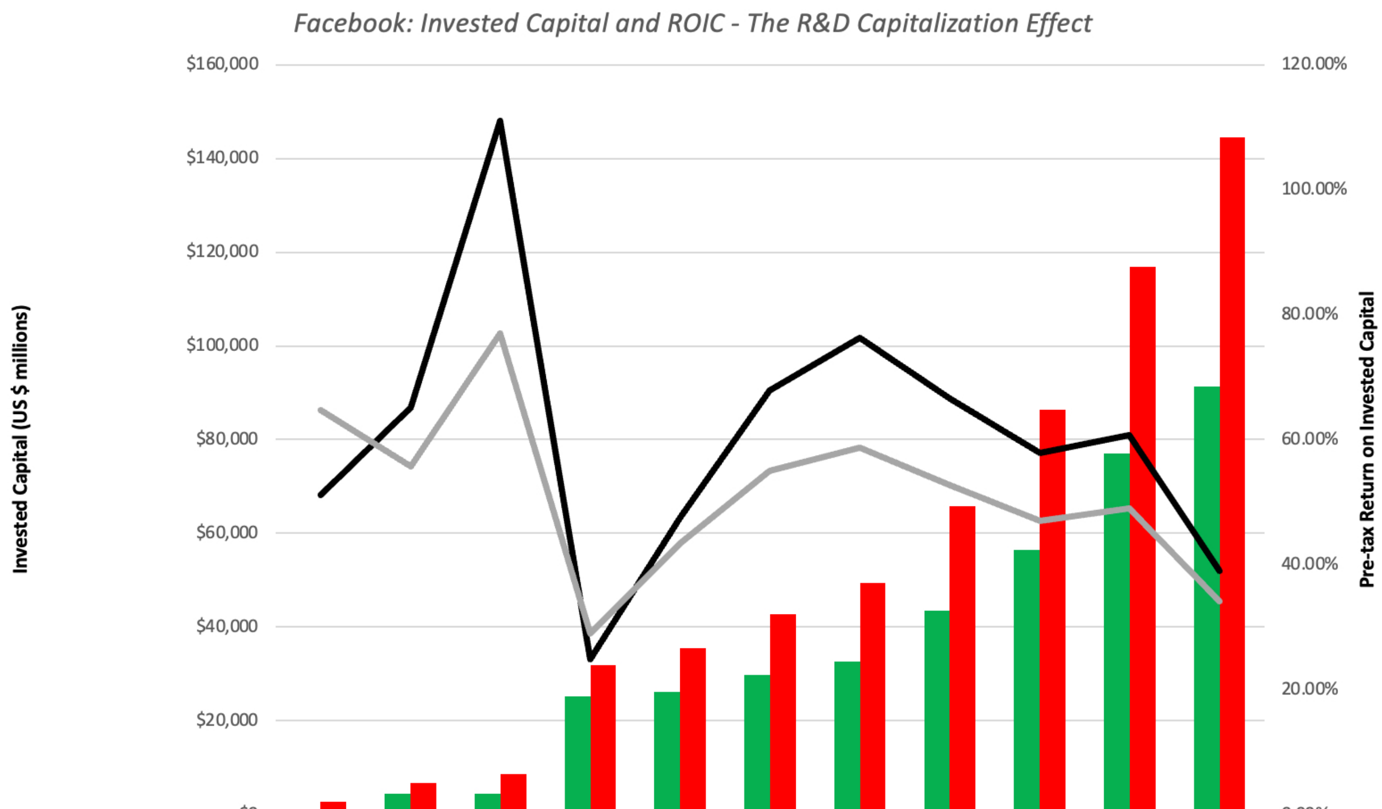
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	LTM
R&D Expense	$388	$1,399	$1,415	$2,666	$4,816	$5,919	$7,754	$10,273	$13,600	$18,447	$24,655	$32,613
R&D Asset	$494	$1,624	$2,140	$4,070	$6,648	$9,302	$12,938	$16,804	$22,194	$29,829	$39,871	$53,129
R&D Amortization	$77	$206	$644	$1,067	$1,827	$2,966	$4,467	$6,163	$7,982	$10,542	$14,107	$18,901

Facebook: The R&D Correction Effect on Profitability



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	LTM
Operating Income	$1,756	$538	$2,921	$4,994	$6,225	$12,427	$20,203	$24,913	$28,986	$32,671	$46,753	$35,543
Corrected Operating Income	$2,067	$1,731	$3,692	$6,593	$9,214	$15,380	$23,490	$29,023	$34,604	$40,576	$57,301	$49,255
Operating Margin	47.32%	10.57%	37.11%	40.06%	34.72%	44.96%	49.70%	44.62%	41.00%	38.01%	39.65%	30.09%
Corrected Operating Margin	55.70%	34.01%	46.90%	52.89%	51.40%	55.65%	57.78%	51.98%	48.95%	47.20%	48.59%	41.70%

Facebook: The R&D Correction Effect on Accounting Returns



	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	LTM
Invested Capital	$1,053	$4,489	$4,497	$25,130	$26,099	$29,745	$32,636	$43,513	$56,523	$76,990	$91,335
Corrected Invested Capital	$2,677	$6,629	$8,567	$31,778	$35,401	$42,683	$49,440	$65,707	$86,352	$116,861	$144,464
ROIC	51.09%	65.07%	111.05%	24.77%	47.61%	67.92%	76.34%	66.61%	57.80%	60.73%	38.91%
Corrected ROIC	64.64%	55.70%	76.95%	29.00%	43.45%	55.03%	58.70%	52.66%	46.99%	49.03%	34.10%

Invested Capital   Corrected Invested Capital   ROIC   Corrected ROIC

Facebook's Metaverse Bet

	Three Months Ended September 30, 2022	2021	Nine Months Ended September 30, 2022	2021
Revenue:				
Family of Apps	$ 27,429	$ 28,452	$ 83,011	$ 82,861
Reality Labs	285	558	1,433	1,397
Total revenue	$ 27,714	$ 29,010	$ 84,444	$ 84,258
Income (loss) from operations:				
Family of Apps	$ 9,336	$ 13,054	$ 31,983	$ 41,058
Reality Labs	(3,672)	(2,631)	(9,438)	(6,890)
Total income from operations	$ 5,664	$ 10,423	$ 22,545	$ 34,168

	Without R&D Correction			*With R&D Correction*		
	LTM	*Reality Labs*	*LTM (without Reality Labs)*	*LTM*	*Reality Labs*	*LTM (without Reality Labs)*
Revenues	$118,115	$2,310	$115,805	$118,115	$2,310	$115,805
Operating Income	$35,543	-$12,741	$48,284	$49,255	-$12,741	$61,996
Operating Margin	30.09%		41.69%	41.70%		53.54%

Investment Consequences

- Profitability: The drop in operating and net margins that you saw in the most recent earnings report should not be taken as a sign that the profitability of the company's online has imploded. Correcting for R&D and the Reality Lab investment, you can see that the online advertising business remains a money machine, generating sky-high margins.
- Pricing: As Facebook's market cap has declined to approximately $250 billion, some have noted that the company now trades at about 8 times earnings, if you use the net income of $28.8 billion assessed by accountants. However, if you are comparing Facebook's PE ratio to the PE ratios of non-tech companies, for consistent comparisons, you should be using the adjusted net income of $42.5 billion, which results in an adjusted PE ratio of about 6.
- Valuation: R&D and the Metaverse investments are cash outflows, but the value effect will depend upon whether you think these investments will pay off in future revenue growth and higher cash flows in the future, and investors, at least at the moment, are not only not giving Facebook the benefit of the doubt, but seem to view this as essentially wasted money, with no payoffs at all.
    - I assign a great deal of blame for this investor mistrust to Facebook, because the company has made almost no effort to explain its business model for generating revenues and profits from the Metaverse.
    - The only thing that Facebook has been clear about is that they will invest tens of billions of dollars in the Metaverse, while being opaque about how it plans to make money in that space.