



The Three Financial Statements: Free Cash Flow and What to Do With It

Hello, and welcome to our next lesson in this module on accounting and the three financial statements. This time around, we're going to be turning our attention not to the financial statements themselves, but rather a related and very important metric that is based on the financial statements – and that is **free cash flow**.

We'll start by going through the basic definition, what it means, and why it's important, and we'll look at some of the insights that we can draw in this simple Excel file for this simple business, by looking at this metric.

And then in Part 2 we're going to do a bit of a comparison between three different companies, Walmart, Amazon, and Salesforce, and look at free cash flow for all three companies. Compare and contrast them and see what this metric can tell us about these types of companies, especially as they relate to one another and especially as it relates to how they actually spend the cash that their business is generating.

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Free cash flow is a particularly confusing concept because there are multiple definitions. Different people will define it differently, and also companies will define it slightly differently depending on the industry they're in and also what makes them look better or makes them look best. But the basic idea behind it is actually not that complicated. All it is, is what is a company's **discretionary cash flow** each year?

So when a company is running its business it has certain expenses that it has to pay for, such as paying for employees, paying for supplies if they have inventory, paying for rent or paying for offices in other ways, if they own or rent offices or other buildings. The idea here is to say after paying for all that, how much cash flow does the company generate that it could use for other purposes?

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Remember how, throughout this module, we've been going through how looking at the income statement itself is a little bit deceptive or sometimes very deceptive, because, yes, you have the cost of goods sold and you have their operating expenses listed here, and you also have non-cash expenses as well, and you have some other items. But, ultimately, when you get to net income or profit after taxes at the bottom, it's deceptive because it doesn't include a number of items that are going to impact the company's cash flow and their cash balances.



First off, it skips working capital and operating assets and liabilities. So, for example, if a company needs to order inventory in advance of being able to sell products to customers, if you just look at the income statement you're going to miss that. And you're going to miss the timing difference there and how the company needs to put cash in upfront to buy its products before it can sell them to customers.

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Then, likewise, if you look at an item like deferred revenue, this indicates that a company is collecting cash before it actually delivers the product or service and recognizes it as revenue. So if you just look at after-tax profits or net income, this is the type of cash flow change you miss. Then, of course, we have other major items, like capital expenditures that are essential for a business to run, that are not directly reflected on the income statement.

So by looking at free cash flow, which most sources define as cash flow from operations minus capital expenditures, we capture all of those items. Now we don't capture every single item that impacts a company's cash flow, and that is intentional, because we only want to capture recurring items that are essential to the company's core business. So if something is truly essential, like ordering inventory for a retailer for example, or actually collecting cash from customers then, yes, you want to include it in this.

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But if it is something that is not essential, like buying or selling securities or investments or issuing equity, issuing dividends, repurchasing shares, those are all considered optional and for that reason we don't include them in this calculation. Typically the only item within cash flow from investing and cash flow from financing that is viewed as essential is capital expenditures. So in most cases we are taking our cash flow from operations and then subtracting capital expenditures.

Why? Because all companies need to invest in their property, plants, and equipment; they need to renovate, maintain, operate, and buy more buildings. They need equipment to continue operating. If it's a manufacturer, it needs factories to manufacture its products and sell them. So these two are viewed as the essential line items we always want to include. So that's the definition and a little bit about why we include or exclude certain items.

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Now the reason this is important and the reason you need to know about this concept is because it really speaks to the core problem that you have as a manager running a business or that you will have as an analyst, analyzing a business, whether you're at a bank or you're on the buy-side, and you're trying to tell whether or not a company might be potentially good to invest in.

Because if you think about it, if a company has positive free cash flow it has a lot of options for its free cash flow. For example, should it hire more employees? Up here, for example, we know that we have a pretty high margin business, a 43% operating margin business. That is extremely high. So we could look at this and say, "Our operating margins are high. We have quite a bit of free cash flow. Based on that, maybe we should increase our spending within our operating expenses. We should hire more sales staff. We should hire more people to do research and development for our company." So that would be one option.

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And then you could also look at this and come to other conclusions. For example, maybe we should spend more on working capital. Maybe we're a retailer, and we have a lot of inventory, and we need to buy inventory in advance of growth. Because we actually need to get that, so we can sell it to customers.

Or maybe we're a manufacturing company and if we have positive free cash flow it's a sign that we could be spending more on capital expenditures. So we look at our current spending on capital expenditures and say, "That's okay. But you know what? If we could put some more of our funds into that, then perhaps by doing that, we would actually increase our revenue up here. So we'd increase our top-line sales and that would be better for our business in the long run."

And there are other options, as well. For example, maybe it really has no ideas. The company has no idea of what it should do with its cash. So it wants to put it in something other than cash, so it gets a little bit of interest or other income.

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So maybe it starts buying securities, maybe it starts buying real estate, maybe it does something else, so that it can at least do something and earn a small amount of income on that cash. It could also repay any outstanding debt it has and reduce its interest expense. Because, remember, right now the company that we're looking at has around \$50 of short term debt and \$240 of long term debt.

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So we could look at this and say, "Well, right now we're paying about \$20 in interest expense each year. If we don't have any better ideas for our free cash flow, why don't we just use it to repay this debt and that way we can reduce our interest expense?" So that would be another option, as well.

And then, still other options, include issuing dividends or repurchasing shares or also making acquisitions. Now with dividends and repurchasing shares, these are both considered returns of capital to the shareholders in the company. So the company has these equity investors that own shares in it.

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And they say, "You know what? We don't have any other plans for this cash flow. We don't want to let a huge cash balance accumulate on our balance sheet. So instead of letting our cash go up to \$660 here, we're just going to distribute it to you, the investors, because you invested in our company. You've supported us all along. You have some ownership in our company, and therefore, we're going to issue dividends to you, so you get cash. Or we'll buy back some of your shares, so you also get cash and maybe give you an improved price for your shares." So those would be other options, and all of these apply if the company's cash flow is positive and generally growing over time.

Now there isn't a simple answer to what's best for a company to do in this case. These are just possibilities and things to think about. It's really your job, if you're the manager of a business or in the finance department, to decide which of these is best to pursue, and how best to be spending your money because you need to balance your short-term profits with long-term growth and profitability.

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So maybe right now you could make your shareholders happy by issuing dividends or repurchasing shares. But, if in the future that means that you won't have that extra factory that you could use to build new products that customers really want, then maybe it's not such a good idea to do that. Or maybe you should reduce the amount of dividends that you were planning to issue.

Then your job as the analyst, looking at this company, is to figure out what the company has done in the past and what it plans to do going forward with its free cash flow, with its discretionary after-tax cash flows that it can use for many of these purposes up here.



So we've been through a little bit about the definition and what to do when free cash flow is positive, what it means. What if free cash flow is negative? What does that mean and what you can tell in that case? The first thing is that you have to figure out whether or not it's a recurring problem or a one-time issue, and then you have to see why it's actually happening.

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So, for example, with some of the companies that we're going to look at later on, in some cases, their free cash flow numbers jump around quite dramatically. With Amazon, for example, their free cash flow suddenly drops in Year 2. Now if you dig into that, you can see that the main reason it drops is because their capital expenditure spending went up way beyond what it had ever been in the past.

Now we don't know whether that was positive or negative, but we do know that's why their free cash flow dropped by so much. So you have to look at that first and figure out why it's happening. In some case, if it really is a one-time issue or it's not something that comes up all the time, then maybe it's not such a bad thing. Maybe it really just happened once and that's it. Of course, it could also be that the company's spending too much on an ongoing basis.

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Maybe it's not using its working capital very well, so it needs to spend a lot upfront, and it doesn't get very much for that spending. Or maybe its business model is broken because it requires far too much in capital expenditure spending or something else like that.

Now if the free cash flow is negative on a recurring basis, if you think about what that means on the balance sheet, cash is going to go down. And eventually the company may reach a point where its cash actually goes to zero or becomes negative. Which means that looking at the financial statements, you as the analyst, will come to the conclusion that the company needs to issue equity or raise debt or maybe sell off assets or do something else to boost its cash balance, so that it can continue to survive as a company.

So those are some of the conclusions you can draw if free cash flow is negative. The next part here on why we exclude and include different items: we went over much of this before, so I'm not going to spend much time on it here.

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But just to review what I said in the beginning, you want to include anything that is a recurring item that is core to the company's business. So we leave out most of what's in the investing activity section, and the financing activity section, really everything in the financing activity section, when analyzing this metric because these are all optional items.

Yes, we're raising debt here. We're also repaying debt. We're issuing equity. We're issuing dividends. But none of these is truly *required* for our business to continue operating, so we simply leave them out of this calculation altogether.

Now we do keep in non-cash charges here, and the reason is because in some cases, such as with depreciation, amortization, and stock-based compensation, these actually save us on taxes, and they are true ongoing expenses that come up year-after-year, so they are recurring. They do relate to our core business and they're going to be there every year, and we want to reflect the tax savings from them.

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For some of these others, it's a little bit questionable whether or not we should really include them. But generally speaking, if they have saved us on taxes and they've really been one-time items, we actually favor leaving these in. Because if we left them out, our cash flow would be artificially low, so in this case, we actually think it makes sense to leave these in and add these back. So that's a bit about what goes into free cash flow at a high level. As I said, the basic definition to keep in mind for now is that it's defined as **cash flow from operations minus capital expenditures**.

Now, how to interpret and use free cash flow when analyzing companies: this is something that's going to come up throughout the rest of this course. But to give you a flavor of this for now, you're going to see this later on when we look at our discounted cash flow analysis. We would look at a few companies there and see how to calculate a slight variation on free cash flow.

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And this is going to be one of the main methods that we use to actually value a company because we'll project out what kind of cash flow the company can generate, and then value them on the basis of the net present value, of that cash flow. It's also going to come up in our leveraged buyout model, also later on. When we look at companies and we assess how much in debt they can repay each year, and also, how much cash they will generate each year.



Now again, the free cash flow used in these contexts is a little bit different from what we just defined here, but the basic idea is the same. What kind of cash flow does the company generate after paying for its required ongoing expenses that it could then use for other purposes such as distributing to shareholders, in the case of a DCF, or such as repaying debt and generating excess cash, in the case of a leveraged buyout model?

Generally speaking, if you're just looking at free cash flow for a company on a standalone basis, you want to look at trends for how free cash flow is changing and also what is driving that change over time.

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So if it's going up, is it because the company is selling more? Is it because they're increasing prices on their units or their products? Is it because they're reducing expenses? Is it because they are spending more or less on CapEx or because they're changing how their working capital is managed? Then based on that, you want to figure out how it's going to change in the future.

Now, the most positive sign here is that a company's free cash flow is growing, because it's actually selling more. It's capturing more of the market. It is selling more units. It's not necessarily raising prices by that much and it is achieving higher margins as it grows because there are economies of scale at work. A "not as good" case would be if a company's free cash flow is growing because of creative cost-cutting or because it's reinvesting less into its business, in the form of capital expenditures.

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Then a warning sign here would be if a company's free cash flow is growing, even though its sales and profits are declining, because it's playing games with working capital. It's taking too long to pay people or because of big noncash charges or because it's really cut its capital expenditures, or because it's just earning more from non-core business activities.

Now in this particular case, we can't say too much about free cash flow because we only have one year of data. I do have a few notes here, but really the most meaningful way to look at this is to go over to our examples for Walmart, Amazon, and Salesforce, and take a look at all three of those. Now I have highlighted financial statements for all the companies down here and I've gone through and highlighted the parts that are relevant to our analysis that we'll be looking at. If you want to you can input all these numbers and look at it yourself. I'm going to focus on what we did in Excel here and go through the companies one-by-one and tell you a little bit about the interpretation for them.



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The reason why I picked these companies is because Walmart is really a pure-play, offline retailer. Yes, they do have some online sales, but it's 90%-plus offline still. Amazon.com is also a retailer, but it's online. It is getting more into physical locations. It does have more of that, but it started off mostly being an online retailer and it's still largely an online retailer.

And then, Salesforce is on the opposite end of the spectrum, because it doesn't sell physical products. It does have plants, property, and equipment, buildings, and computers, servers, equipment, things like that. But it doesn't have inventory. It doesn't have to order inventory and then sell it to customers. So in that sense, it is a very different business from both Amazon and Walmart. So I wanted to compare and contrast all these and show you a little bit about what free cash flow means for all of these companies.

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With Walmart, we can see that its free cash flow here has been jumping around a little bit. It has declined and then grown and then it declined again, and you see that reflected in its growth rate. You see that its capital expenditures, as a percent of cash flow from operations and revenue, haven't really been changing by all that much. So it seems like something else is responsible for its free cash flow jumping around here.

Now if you look at its working capital over here, you can see that the change in working capital as a percent of the change in revenue, which is one of the key percentages you look, has been somewhat inconsistent. It's always negative. So as the company grows, it needs to spend on working capital. It's mostly because, of course, they need to buy a lot of inventory up front. So they need to front the cash and then they can finally sell the products and recognize the revenue. This is very common for a retailer, so this is nothing new.

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What does stand out, though, is that all their other items, accounts payable and accrued liabilities, and accrued taxes: the signs in all of these have been changing a lot and the magnitude of these has been changing a lot. Where something like accounts receivable is staying a little bit steadier over time.

So our overall conclusion here would be that, yes, their revenue is going up. Their cash flow from operations is a little bit spottier. It's going up, but then it's decreasing, and then free cash



flow itself is really all over the place here. The reason for this, if we had to pinpoint it, is not really because of CapEx. That seems to be about steady over time.

The real reason for this is because something very strange is going on with working capital. It goes to a very, very negative percentage here. It looks like what may have happened is that they owed a lot of taxes in past years, and then they finally got paid out in Year 3. So in this case we'd say that it's not really positive or negative. It just seems to be that working capital is a little bit unpredictable here.

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We don't know if the company's necessarily playing games, but we do know that something pushed down its requirements in Year 2, and then, something pushed them way up in Year 3. So overall we'd say here that the organic sales growth is contributing somewhat to free cash flow. But a lot of what is actually changing here is also a direct result of what's going on with their working capital, which is usually not a great sign. Usually you don't want working capital to affect free cash flow all that much, or if it does, you usually want it to affect it in about the same direction over time.

So let's move on to Amazon over here. Now this one's interesting because cash flow from operations is actually going up each year. But then, free cash flow declines, then it declines by a lot and then it rises by a lot. And if you dig into the reasons why here, it is sort of the opposite scenario from what we saw for Walmart.

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Because with Walmart the main reason that happened is because something weird was going on with working capital. With Amazon, the change in working capital as a percent of the change in revenue is always positive. So as the business grows it actually generates more cash than you'd expect. In large part because of its accounts payable, right here. This actually exceeds the change in inventory each year.

So yes, Amazon is a retailer just like Walmart, but it is waiting, apparently, a much longer time to pay suppliers because of its accounts payable being such a large positive number here and outweighing the fact that it does still have to spend on inventory upfront. So a very different scenario, a company with very different policies from Walmart, it would seem, from looking at these numbers.



They do have some other items, accounts receivable, which stays about steady over time, accrued liabilities, and a few others. But really these two, inventory and accounts payable tell the main story here.

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Now revenue is clearly growing each year by a substantial amount, 20% to 40% growth rates. Cash flow from operations is also growing by a good clip, and so our main question here would be: is Amazon actually spending wisely on CapEx? When CapEx virtually doubled from Year 1 to Year 2 here as a percent of cash flow from operations, or as a percent of revenue, was that actually a good thing?

Was that a wise investment for the future or is the company just wasting by spending so much money on this? We don't know that and that's something that we'd have to dig into, but those are some of the conclusions we could draw from its financial statements. Once again, I have some written notes down here on all of this.

And then, let's go over here finally and take a look at Salesforce's numbers. Now here, once again, we have a company where cash flow from operations is increasing by a substantial amount. Capital expenditures is also increasing over time.

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But its free cash flow is actually increasing in each year, although that goes down to a very low percentage increase by Year 3. Now if we look at its net change in working capital as a percent of the change in revenue, this is very positive in Years 1 and 2, but goes down to a slightly negative number in Year 3. The main reason for this is because, as a subscription software company, they collect a lot of cash upfront from customers, and then they recognize it as revenue over time. So the deferred revenue line item is very significant here.

They also have a few other items that reduce free cash flow, like accounts receivable increasing each year or waiting on cash from certain customers, and then deferred commissions, having to pay out commissions in cash and then recognize the expense over time. Overall here, we probably buy into Salesforce's free cash flow growth a little bit more than the others.

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Just because revenue is growing, cash flow from operations is actually growing each year, roughly in line with the overall trend in revenue growth, higher at first and then declining over



time, and our free cash flow is also growing. The main question we need to ask ourselves is: it seems like CapEx increased a lot in Year 3 here, going from 23-24% to 34% of cash flow from operations, and as a percent of revenue it also increased. So is that real? Is the company going to keep doing that in the future and why did it increase so much in Year 3?

Also, in this case if you look into its financial statements, the company spent quite a bit on acquisitions over time. So those are some questions we'd have. Is that capital expenditure spending really going to stay at that level or even go up in the future? Is it going to go down or is the company going to use its free cash flow on other items, such as acquisitions?

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Those are some of the conclusions we can draw based on our analysis of these three companies. As you can see, three companies in different, but related industries with a good amount of overlap, and they all have different free cash flow profiles as a result of that.

Let's do a quick recap and summary now of everything we covered in this lesson. Free cash flow means cash flow from operations minus CapEx, and it's really telling you, after paying for a company's required expenses, how much cash flow does it have left for other purposes? It could hire more employees. It could spend more on CapEx. It could make acquisitions. It could repay debt. It could buy other assets. It could buy other companies. It could issue dividends or repurchase shares, or even spend on inventory in advance.

If it is positive all those apply. If it's negative, then it may be a sign that the company needs additional funding to fund a cash flow shortfall. You see it used in DCF analyses. You see it used in leveraged buyout analysis in LBO models, and you also see it used for standalone financial statement analysis, as we did here.

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When you're analyzing it you really need to see what is actually causing free cash flow to change. Is it revenue growth? Is it expense cutting? Is it capital expenditure or working capital changes? You ideally want scenarios when it's really organic sales and economies of scale that are driving growth.

It's not as good when it's inconsistent or when expense or CapEx cutting, or inconsistent working capital are driving changes, and it's even worse when you have accounting gimmicks that are affecting free cash flow and distorting the real picture.



So we'll see many examples coming up ahead in this course of how to calculate this and how to project this. But for now I just wanted to introduce this concept of what free cash flow means and how you use it. And as I said, we'll be expanding on this and looking at different variations and different ways to calculate this in upcoming lessons and modules.