



John Rotonti Shares a Master Class on Research and Valuation

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Dave

0:00

All right folks, welcome to Investing for Beginners podcast today we have a very special guest. Today we're excited to talk to John Rotonti, formerly of the Motley Fool and now a free agent looking for other fun opportunities to pursue. And John was kind enough to give us his time to talk about all kinds of fun stuff with the markets. We'll also talk about ROIC return on invested capital, Andrew and I's favorite subject and valuation as well as other fun stuff. So John, thank you very much for coming to join us today. We appreciate your time, and your knowledge that you're going to share with everybody.

John

0:30

Dave, thank you so much for having me on the show. You're welcome.

Dave

0:33

It's gonna be a lot of fun. Now, one thing I want to mention to everybody, before we really dive in is we're probably going to talk about some more advanced topics today. So if there are things here that you're not totally understanding, check our past archives, check out our website, investingforbeginners.com. We have lots of great articles about DCS as well as ROIC to help you learn some of the topics we're talking about. Or you can simply just skip on past and go to the next episode. So with that, too, John, let's kind of dive in and maybe, to kind of ease everybody in, maybe you could tell us a little bit about how you got started investing, like maybe what was your first investment? And what do you want to be when you grow up? Yeah.

John

1:12

Thanks. So I got started in investing when I was a freshman in college. At that point, I did not know what a stock was. I was probably vaguely familiar with this concept of the stock market. But I didn't know what it was. The story is I found out when I was a freshman in college that my parents had basically gone bankrupt. And I wanted to help them out in some way. So I wanted to learn about making money. And I went to the library and I read Peter Lynch's one up on Wall Street.

And the book changed my life. And it was one of the, you know, very few lightbulb moments I've ever had in my life. Like what bulb went off. And I realized that I love this. I'm passionate about it, and that I can probably do it because I loved research. I was always good at research in high school and things like that. So I've been reading about businesses and investing pretty much every day since I was a freshman in college. And now I'm 42 my first investment, honestly, you know, most people can give you one name, what happened was, I got value line. And I started to look at some Peter Lynch metrics. And I bought a basket of stocks very early on blue chip names like Pepsi like Coke. So those were in my very early baskets. Let's go with Pepsi. It was definitely a day one stock. I don't know if it was the first one I bought on that day. But Pepsi was a day one stock.

Dave

2:46

Oh, that's awesome. My Android eyes both were Microsoft. That was oh, yeah, that was for you. Yeah, I bought it in 2012. Two, so it was like, you know, like 3435 bucks a share at the time. So I was like,

John

3:00

Oh, very interesting. So I pitched Microsoft to a newsletter I worked on at The Motley Fool in 2014. So very early in Satya his career as CEO, I think the stock was 40. Maybe it was 42. It was you know, trading at 10 times free cash flow. So you know, 10%, free cash flow yield. And we didn't go with it at the time in the newsletter. And so that's when I bought my Microsoft stock. So not too far after you. I think it was 4042. And like I said, 10 times free cash flow growing at a mid teens rate. And so that's obviously done very well, for both for both of

Dave

3:39

us. Right, exactly, exactly. You know, it's funny, too, because I bought that. And then I bought a few other ones after that, that did not do as well that kind of a shattered my illusions that hey, the stock market is easy and be that I might have to do a little more work on this than just going Hey, I like this name. And I like this name. So that was my kind of rude introduction to that.

John

4:00

Definitely. Alright, so

Dave

4:02

maybe we could talk a little bit about, like how you started, you said, you mentioned earlier that you like research. So what does that mean to you? Like, if you're, if you've set out to learn about Company A, what does research look like to you?

John

4:17

My process. So I've been building this process over the years, and I've been investing for over 20 years. Typically, what I will do is the first thing I'll do is take a quick glance at the balance sheet. Just so you know, 30 minute glance to make sure that I think the balance sheet is strong enough for the company to survive almost any scenario. And that's my first filter. I'm not avoiding debt. I'm not avoiding leverage. I just want to make sure the company is capitalized well enough. And it's cash generative enough to just survive, you know, pretty severe down cycle.

So the first thing I do is take a quick glance at the balance sheet if it passes At first filter, I will then read the filings. And so, you know, read the most recent 10k and annual report, I'll read the most recent 10 Q and the proxy. Once I do that, you know, I will, I will read as much research on the company as I can find, you know, sometimes I can get my hands on really good Wall Street research, sometimes I can get my hands on great research from newsletters, and I will then read industry research from, you know, industry specific journals.

So for example, I was researching Lindy and I got my hands on gas world, which is a great industry specific journal for industrial gas companies. At this point, I'll go through all the press releases going back years, just to make sure I didn't miss any big announcements, big acquisitions, you know, big divestitures, fines are

anything that the company, you know, had to, you know, pay if they made some sort of mistake or broke some sort of regulatory regulation. If the CEO has written letters, I'll read back as far as I can in those letters. And then a very big part of this sort of reading is I will read back, usually two years worth of earnings transcript, so eight, eight transcripts. Usually, if something big happened further back than eight years, you know, the company made a big transformative acquisition, the company brought on a new CEO. But sorry, further back than two years, then I'll go further back, I'll read back, quel transcripts, I'll read back three years. But I really dive into those transcripts. At this point, I've read a lot about the company. So I will probably start reading about its main competitors in the industry.

After that, I do pretty thorough financial statement analysis. So I get into the numbers, I try to really understand the accounting, try to get a good idea of the earnings quality, and just really want to understand the economics of the business, and how cash flows through the business the whole time, I should say the whole time doing this from day one, I'm keeping a list. I'm making a list of questions, Dave? Questions that I need to get answered or that I want to get answered. As I'm going through this process, I'm answering some of those questions as I learn more about the business, as I learn more about the industry as I learn more about the management team on answering those questions that as I go along.

So I've done financial statement analysis, I've looked at the accounting, I've done the earnings quality, and then I've got frameworks in my head as well. So the whole time, I'm thinking, does this company have one or more what I believe to be sustainable competitive advantages? So I'm trying to answer those questions as I go as well. I've got a risk model in my head.

So I'm answering, you know, trying to determine how risky I believe the business to be, I've got a management framework or mental model in my head. So I'm trying to analyze the management as I go through this research. You know, at this point, I'm probably ready to do a valuation actually, actually, before that. So I've done the primary research, I've looked at the filings, I've read the earnings transcript, right, then I need to do what I try to do what Phil Fisher called scuttlebutt, right. So I try to boots on the ground research to speak to competitive companies speak to suppliers speak to customers. When I was at The Motley Fool, we had these chat rooms, these online chat rooms, and you know, you could go on there, and you could find an expert in just about anything you could find, for example, a surgeon using certain medical devices.

And so if I'm researching a medical device company, I can find out what a surgeon thinks about those devices. You know, so that sort of scuttlebutt research after that, probably ready, ready to try to estimate the value of the business and the stock. And, you know, I use a variety of methods to try to come up with what I believe to be a range of fair values that I feel comfortable with that I have conviction, and then if I decide not

to buy the stock at that time, then the research is ongoing. You know, next quarter, I'm going to read the earnings transcript, I'm going to read the 10 Q. And so it just becomes an ongoing process until the stock reaches a place that I think there's enough of a margin of safety, or a discount to what I think it's worth.

Dave

9:24

Now. That's awesome. Wow. So many questions popped in the head while you're talking. Please. Number one, how do you source the ideas before you even start all this kind of this kind of analysis?

John

9:35

Great question. I probably should have started with that. So three or four primary ways I source ideas. One is, I have a watch list of what I believe to be the highest quality growing businesses in the world. And these are companies where I've done at least some research on them. Some of them I've done, you know Deep, rigorous dives, others have maybe only spent a couple of hours. But either way, I've done some research on all of these watchlist companies.

And I feel like I could get up to speed on these companies and their businesses very quick, not maybe not very quickly, but quickly. So the first way I source ideas, I monitor this watch list. And if any of those stocks just get crushed, honestly to the downside, then I go in and take a look. Okay, why did the stock fall? Do I think it's a temporary phenomenon? Do I think the market has overreacted. So that's the first place I source ideas is when stocks I follow on my watch, let's watch lists get crushed. Honestly, a lot of times, I'm getting ideas when markets are red stocks are selling off my favorite time to invest. And this these come very, very rarely is when everything sells off. When there's a broad market sell off. You know, whether it was 2008 2009, whether it was March 2020 happened very quickly.

But it did happen market fell 34% and 23 days or something, those are the best times to invest pretty much unequivocally because everything sells off. And so you have a pretty good idea that it's not a company specific issue. It's just the world losing its mind, right, it's just be you're taking over, it's just panic setting in. And so I'm really trying to buy when the market is just puking out stocks, either across the board, or when maybe a certain industry is going through its own bear market. So for example, right now, regional banks seem to be going through their own bear market, while the rest of the market is just humming along. So that's the first place I monitor a watch list when those stocks sell off, I get very interested. The second idea is over the years, I've built up a what I believe to be extensive network of of great value investors. And you know, sometimes I get ideas talking to my network. That's probably the second way. The third way. And

maybe I'll stop here is I read investor letters of investors that I really admire. Some of these investors may be in my network, some of these investors may not be in my network, my network, but each quarter I'll read their letters if they put their letters out there. And you know, sometimes they give great blurbs great thesis on why they bought a stock in that quarter. And so I'll get ideas that way. And then, you know, reading their 13 F's are another way to get good ideas. Yeah, those are the main ways I get ideas.

Dave

12:42

Oh, that's great. That's awesome. So I love the idea of having that watch list and continue working that watch list because like you said, when the market, you know, pukes up an opportunity, you know, not saying that you invested in Netflix, but you know, when that announcement came that their subscriber count had dropped for the first time ever, and it lost 20 Some percent in a day that could have been an opportunity for that if you that was a company you knew well, I guess the question that I was thinking about how can I

John

13:09

can I? Example so I was leading a, I was leading a portfolio at The Motley Fool at the time. I'm no longer at The Motley Fool. And we got lucky. And we basically bottom ticked Netflix last year, you know, we got we were ready to go. Several members of my team had done good work on Netflix. I had done sort of 30,000 foot level work on Netflix over the past decade, very aware of the company, its growth profile, its margins, its business model, what I thought were maybe some competitive advantages there. Its leadership, obviously. And we because several other members had done deep research because I had done some research, we were able to act very quickly. We bought Netflix very close to the lows, and the stock doubled for us in I don't know if it was eight or nine months. By the way, we did the same with Facebook.

Everyone freaked out about Facebook, meta sorry, meta, everyone. Yeah, everyone freaked out about meta, we bought very close to the lows and that one double force in two months or three months. And so now, in hindsight, I did not size those positions correctly, because they were going through challenging times. I took very small positions. I consider them riskier, on, you know, the spectrum of how I manage risk. And so, you know, I size them very small. But like I said Facebook met a doubled for us in two or three months and Netflix in about eight months. So yeah, that that is the type of opportunities I'm looking for.

Dave

14:50

Yeah, that's awesome. You know, I kind of go back to you still. You mentioned that you had been doing work on this company for a decade and you had other people working with you that had a much deeper knowledge of it. So it allows you to pull the trigger. And I love that idea of really working off of your watch list. I think a lot of people, including myself, have just looked at a watch list as like something, hey, this is something I'd love to own someday. But not thinking about doing the work on those companies.

So that it's kind of an ongoing because, you know, as a newer investor in the last seven or eight years, I have learned the longer I've held Microsoft or Visa or Odgen, the better I know it. And so it makes a lot of sense that when you have a watch list, and you're doing all that work on those companies that that helps you be able to be ready to pull the trigger. When an opportunity comes, why search around for the next new thing when you got all these great things right in front of you, that you could take advantage of when they come up?

John

15:39

Absolutely. So you do the research before you buy? Yeah, and yeah, for sure. And that was one that I covered as what we called a tier one company at The Motley Fool we broke our coverage universe into tier one and tier two tier companies we thought we knew best, I actually covered metal as a tier one company. So that one, I had done a lot of research on myself.

Dave

16:01

Alright, so I guess another thing I wanted to kind of chat a little bit about is the ideas of the questions and answering those questions. Are those pre conceived questions? Like? Do you have a checklist that you kind of try to work through? Or is it more company by company? Like, if I'm researching this, I'm going to answer these questions about you know, as you obviously, you're going to come up with questions that you want to answer while you're learning about the company as well. But do you work off a checklist? It's

John

16:24

both I do have an investing checklist that is applicable to most businesses, you have to tweak it. And that's been published on full DICOM. I think it's called Do you have an investing checklist? And it's 10 checks, but each big question 10 big questions, but each question has, you know, multiple sub questions. So for example, I told you at the beginning of this podcast that I start with balance sheet. So the first question I ask

out of the 10 is does a company have a strong balance sheet? But then under that, you know, there's a dozen questions, I'll ask to actually determine whether the company has a strong balance sheet. Well, another of the 10 big checks is, you know, how risky is the business? Well, I've got a few dozen quest sub questions under that big risk question to help me determine whether I think the business is you know, low risk, medium risk, high risk, or somewhere in between on that spectrum.

So there is a checklist you do tweak it for different industries, you know, not, you know, retail, industrial consumer type sort of straightforward industries, banking, you have to look at some different, you know, metrics, insurance, you have to look at some different metrics, alternative asset managers, you know, different metrics there. But the framework is largely the same with tweaks here and there. And then, like you said, Those are not the only questions I ask, because as I'm researching each individual business in these different industries, I will come up with questions specific to that company.

You know, things that I don't understand yet, or things that I'm confused about, or things that I want more detail or more color on. These are questions that I am writing down in a Word doc, as I'm going along in that process. And I'm answering many of those questions on my own. So when we were just talking about the process, I left one critical step out, which I could mention now, I do try to speak to the management teams of most companies that I'm researching. And the questions that I asked them are the remaining questions that I have not been able to answer on my own, as I'm going through that research process. So those are the main questions I will ask them. So how all comes together in the end?

Dave

18:47

Wow. Okay. So how do you or how do we talk to management? You know, as Jamie Dimon gonna pick up the phone and talk to me if I have questions.

John

18:56

Right. So people said, I tried to speak with most management teams. I don't think I could get Jamie Dimon on the phone, obviously. But you know, there are many companies in the smaller mid cap area where you can get the CEO or the CFO on the phone. I've done a lot. And then at some of these larger companies, you get the head of IR but at some of these larger companies, the head of IR are literally legends. They're excellent.

So at Texas Instruments, Dave Paul, he's the he runs the IR team at Texas Instruments. Dave Paul knows as much about Texas Instruments as anyone on the planet literally, and he's an excellent head of IR excellent. I

own Texas Instruments. I've spoken today, Paul, on multiple occasions, multiple lyndie. Another large cap company won Polly as runs their IR department. Just an incredible head of IR just absolutely incredible. I've spoken to one polyas on several several occasions. Oh, that's awesome.

So, yeah, I just, you know, how do you do it? I email them. If they don't answer, I email them again. Honestly, if they don't answer, I email them again. And I keep him on. Sometimes I'll call and say I've sent three emails, and no one has. Actually, most of the time they give in. And they speak to me. But I should say, most companies want to speak to shareholders. And so it's, it's not difficult.

Dave

20:28

I think I know that I put up a wall, like, you know, these people are here, and I'm here and you know, they would never want to want to talk to me. And I've been told by other people that that's not the case. Like you said, they want to talk to us. So I guess I would encourage our listeners, if you're, you know, if you're listening to this, and you're, you know, you think that that's something would be beneficial for you, then I would encourage you to do it.

John

20:48

Yeah. Well, while we're talking about excellent heads of IR, I'll just throw one more out there, Craig Laurel Larson at KKR. So, you know, I have spoken to these people on multiple occasions, and they are incredibly helpful.

Dave

21:02

Oh, that's awesome. Awesome. Yeah. Cool. That's a great nugget there right in there. So. Okay, so let's say we've we're working on a company now. And we've been doing all this primary research, and we've done a lot of work, where are there any certain points where you will drop off? Or you'll say, No, this is either the to hard pile or there's too many red flags, as you're going through your you know, your kind of your process? Is that where you kind of maybe step away from the company? Or do you just want to kind of dive in? Do you just work through it? And then when you get to the valuation part, you can make a choice of whether you want to continue or not?

John

21:35

No, I'm dropping off all the time, at different steps of the process. So I, I may, if I don't think the balance sheet strong enough, I drop off in the first 30 minutes. That's my first filter. But then as I'm going along, you know, if multiple red flags are popping up, I'll drop off, but I don't I can't say when in the process that's going to happen. It's going to be company by company. It's going to be company by company. But yes, but like I said, Now I've done some research.

And so it can go on that watch list that I was talking about. If I think it deserves a place on that watch list, if it is a high quality, growing business, sometimes I'll decide, You know what, it's not that high quality, or I don't think this growth is sustainable, or I just don't trust management it then it won't go on that watch list. But yes, I drop off if I'm doing various degrees of research on different business.

Dave

22:30

Okay, that makes a lot of sense. Yeah, it makes a lot of sense. All right. So now, let's say that we've gotten through the primary research and now we're ready to start looking at a value for the company. What does that look like to you like, what is your Are you do you work through models that you have? Do you work do you use DCF? Do you work at multiples or combinations thereof like what what does that look like to you?

John

22:53

Yes, all of the above. So, empirically, the the single metric that is the best predictor of forward rate of return is free cash flow yield, empirically and there there are numerous studies from numerous investment firms and asset managers showing this so companies that have higher free cash flow yields tend to perform best in the future and generate the highest annualized returns. There was one Bank of America study, I think they looked at 40 metrics and free cash flow yield was the number one. T Rowe Price has put out research on this Manning and nap EA has put out research on this epic Investment Partners has put out research on this. The research pacers ETFs has put our research on this. Bill Miller, in an interview I did with him has said this empirically, the research is is overwhelming that free cash flow yield is the best predictor of full rate of return. So I'm definitely looking at free cash flow yields.

And I'm first door trying to make sure I am using a normalized level of free cash flow. What do I mean by that, let's say a company sold off a big business, the company could be struggling, the company could have terrible returns on invested capital, the company could be in secular decline, but it sold off 50% of its business. Well, that's when it sold that business. That's a big cash inflow. And if you're calculating free cash

flow correctly, that flows into free cash flow. And then you just do a screen for high free cash flow yields. And you look over the last 12 months and you see XYZ company has a 30% free cash flow yield or believe it or not a 50% free cash flow yield. You don't just buy write that in there right you want to make you want to know what that denominator is you want to know what is going into that free cash flow what is driving such a high yield.

So I'm very cognizant that I'm trying to use what I believe to be normalized free cash flow or my estimate of what I believe free cash flow to be one or two years out, you know mid cycle type of normal free cash flow, and then to that free cash flow yield you can add what you expect free cash flow growth today. Over the next three or four or five years, and you can come up with a rough estimate of expected annualized return. So rough numbers of free cash flow yield on a normalized basis is 5%. And you think the company can grow its free cash flow over the next five years, in your base case at 10%, then you take five plus 10, that equals 15.

Roughly, you think the company can deliver a 15% annualized return on average, if you know how to estimate free cash flow. Another good method is, before we even get into model save, is total shareholder return. So TSR, that is simply dividend yield, plus earnings per share growth, plus or minus the change in the P E ratio. And so, you know, let's just assume for a second the company, you believe the company is trading at a fair PE multiple, you don't think the multiples going to decline or expand, you think the company is trading at 18 times earnings, you think that's a fair multiple, you think that's a justified multiple, by the way, we can get into how to calculate it outside multiple, but then you can roughly estimate what you think you're going to earn in that stock by taking the dividend yield, plus what you think earnings per share growth will be. So if the dividend yields 2%, you think earnings per share are going to grow at 10%. And you don't think the P E multiples is going to change much. That's 12% expected, annualized return to plus 10.

So there are these sort of quicker, back of the envelope methods that actually aren't that bad, then we can talk about modeling, as sort of another way to triangulate what you believe to be a range of fair values, you could do a full on DCF model, or you could just, you know, estimate out what you think earnings per share free cash flow per share will be five years down the road, let's say right, five years down the road, then you multiply that earnings per share five years down the road by what you believe to be a fair, PE multiple, maybe it's based on what the company has historically traded at it on a PE basis, maybe it's based on a formula you use for a justified PE multiple, maybe it's based on where the industry average, or that peer group trades on a P E basis, you take your earnings per share estimate five years out, you multiply it by what you believe to be a fair multiple, five years out, and then you discount that back five years because of the time value of money.

That's another sort of quick and dirty way to model out of business, then, you know, you could do a traditional DCF. And then you can also do a reverse DCF. Reverse DCF is, rather than a student making a bunch of assumptions of what you think revenue growth is going to be for the next 10 years, let's say what you think margins are going to be for the next 10 years, what you think the reinvestment rate is going to be for the next 10 years. Those are all educated guesses, those are assumptions you're making in a traditional DCF. You make these assumptions. And then you hit enter in Excel and it pops out an an estimated fair value based on your assumptions, you could reverse that you could invert that process.

And start with the stock price today, start with the stock price, and back your way into reverse engineer what the revenue growth rate would have to be, or what the margins would have to be or what the cost of capital would have to be to justify today's stock price. So you're almost using solver in Excel, you can only solve for one variable at a time. You pick your variable revenue, growth margins, cost of capital, whatever. And then you say, Okay, let's pick revenue.

You say based on today's stock price, the company would have to grow revenue at 20% annualized 20% CAGR compound annual growth rate over the next 10 years to justify today's stock price. And then you ask yourself, based on all of the research, you've done, all of the due diligence you've done, whether you think the company can in fact grow its top line, or its revenue at 20% compounded over the next 10 years. And if the answer is yes, in fact, I think it can grow 30% which is a very high rate, you know, very few companies can do that. But if you believe that, in fact, the company can grow 30% And the markets only pricing and 20%

Then maybe you have found yourself a disconnect in the expectations priced into that stock, and maybe you found yourself a bargain. So I use it for there are other methods you know, you can if it's an industry prone to acquisitions, for example, prone to growing through m&a, mergers and acquisitions. Then you can see what other similar comp And he's in the industry, what multiples they have been acquired at. And then you can apply that acquisition multiple to the company that you're researching, to see if there would be any upside there. So a lot of tools that you can use at your valuation disposal.

Dave

30:17

Yeah, ton of tools ton of tools. All right. So there's a lot to unpack there. So let's go back and start with a couple of, I guess, easier ideas. Number one, you mentioned several times normalizing like the free cash flow, for example, what does that look like? If I don't? If I don't really understand what that means? What does that mean is kind of weigh that out?

John

30:36

Sure. So certain industries are more cyclical than others, meaning they have sort of periods, when everything is booming, and humming along and doing well. And then periods where times are tougher, right. And so when everything is booming, and humming along and doing well, earnings are rising, and you know, reaching a peak of sorts. And when things are doing poorly, when the industry is struggling, earnings are falling, or free cash flow, you know, pick your metric, and potentially approaching a trough or hit low point. And so what you want to do is try to understand the cycle of that industry, what margins look like, at a mid point in that cycle, not at peak earnings, not at trough earnings.

Right, you want to look at what revenue growth is. In the industry, if it's a cyclical industry, maybe its GDP, maybe the revenue is growing at GDP plus one or 2%. Maybe it's also an acquisitive company. So its revenue is growing at GDP plus one or 2% plus 1%. From acquisitions, if they are highly acquisitive, so then you know you got GDP is two or 3%, you've got this industry is growing one or 2% faster than GDP that gets you to three to 4%. So right now we're modeling out revenue is what we're doing, we're laddering out revenue, then if I'm just making this up, it's an acquisitive company that adds another 1%. So that brings you to four or 5%. Right? Right, maybe the company is also taking a percent of market share a year.

So it's so not only is the industry growing faster than GDP, but maybe that company is growing faster than the industry. So we're laddering out how to estimate revenue. So now you're at six or 7%, I think, then you have to do a lot of research to understand what you think, is a normalized mid cycle EBIT margin or operating income margin, EBIT earnings before interest in tax. There's a lot of work that goes into that. But you know, I'm trying to simplify the steps here. And so you multiply that mid cycle, once again, not peak, not trough, sort of mid cycle, EBIT margin times what you think the revenue is going to be in three years, let's say.

And you can get a mid cycle EBIT earnings before interest in tax, operating income mid cycle, not peak not trough. And then of course, you have to make some other adjustments for one time things, you got to come up what you think is a normalized tax rate, if the company has debt, because once again, we've just calculated mid cycle, E, B, I T, earnings before interest in tax. So then from that you have to take out taxes.

Don't try to be a hero there, you know, 25%, whatever is normal for the industry. Then if the company has interest on its debt, you take that out, and then you've got mid cycle, normalized net income, bottom line, net income gap net income, like I said, maybe you're making other one time adjustments, maybe you're adding back amortization of intangibles, I don't want to get too much into it. There's lots of adjustments, but you get

a mid cycle, normalized earnings number, you divide that by the number of shares outstanding, and you get mid cycle earnings per share, or midcycle, free cash flow per share.

Dave

34:15

That's awesome. Awesome. All right. So we've done all that work. How do we connect that to? Let's say that we want to do we want to use a DCF? How would you connect that work to the DCF? And what are the I guess what are some of the inputs that you look at for making a DCF? And understanding that they are estimates that there is no absolute answer to any of these?

John

34:43

Awesome. So let's first talk about what a DCF is. It's a discounted cash flow model. There are two primary parts to a traditional DCF you have what's called the forecast period or the projection period. That's the period where you're actually making assumptions, you're forecasting these line items, whether it be revenue, whether it be margins, whether it be tax rate, you're for reinvestment, you're forecasting these things. But that has to stop at some point.

Most models Stop it between five and 10 years for the forecast period, because our crystal ball goes dark, our crystal, you know, we don't know, you know, I think one thing investors have to do is be honest with themselves. And one of the ways we can be honest with ourselves is we don't have a clue, not a clue what a company is going to be doing, you know, 20 years from now, much less 100 years from now. But when you're doing a DCF, it's the best tool we have. It's not perfect, but it's best that we have, you are estimating out what you think the cash flows are going to be from now, until the end of the life of that business.

Some businesses may survive 100 years, right. And so we can't make those estimates, we can't make those judgments. And so what we do is we split up this model into a forecast period or projection period, which is five to 10 years usually. And then the second part is a terminal period, where let's say we're using a 10 year discounted cash flow model, the terminal period would be what we think cash flows will be from year 11, the first year after the projection period ends until the end into perpetuity, actually, it's actually a mathematical perpetuity is the terminal value formula. So that's how you build out this, this model.

Now, why is it called the DCF. So it's C F stands for cash flow. The reason we're talking about cash flows is because the value of any financial asset is the present value of future cash flows or present value of future

free cash flows. Okay, so that's an CF, the D is a discounted part because of the time value of money, this idea that \$1, today is worth more than \$1, a year from now and \$1, a year from now is worth more than \$1 100 years from now. Because we could take that dollar today and invest it in earn some return. Right? So because of this time value of money, we're projecting out these cash flows the C F part of the DCF, we then have to bring them back to present value. That process is called discounting.

That's where the D comes in, in the DCF. It's on a thick, really high level here, let's see, there's three things you need to think about at a high level. When building one of these models. One is size of Cash Flows matter size matters. \$10 million in free cash flow is worth more than \$1 million in free cash flow. That's basic size matters. The second thing is the timing of the cash flow matters. We just discussed that \$10 million dollars a year from now is worth more than \$10 million 100 years from now \$10 million a year from now is worth more than \$10,000,000.10 years from now, because of that time value of money.

And then of course, we have to look at the riskiness of that cash flow, how risky is the business? How risky is the industry. And depending on how risky we think those cash flows are, we will discount them back to the present at different rates. And these rates are called discount rates. They're called hurdle rates. Sometimes it's referred to as the cost of capital. That's the idea. That's the logic behind a DCF. You have to understand size matters, timing matters, and riskiness matters.

And then you know, beyond that you can build a simple DCF you don't have to use eight lines of an Excel spreadsheet, you model out revenue growth each year for the next 10 years, you pick an EBIT margin in earnings before interest in tax each year for the next 10 years. And you know, for the great business, achieving scale recognizing operating leverage, maybe you think those EBIT margins are going to increase a little every year. Let's just keep it simple right. So we think EBIT margins are going to very slowly rise from year one to year 10 of the model, you multiply the EBIT margin times the revenue growth and you get EBIT or earnings before interest in tax each year for the next 10 years.

You pick a tax rate and now you have you multiply EBIT times one minus that tax rate and you get no pet super important metric which we should talk about that stands for net operating profit after tax just operating income after tax from no pat you subtract reinvestment reinvestment can include working capital, capital expenditures and acquisitions at the end nobody's really inquisitive. So you take your note, Pat, you subtract reinvestment, you have free cash flow. That's it. I don't know if that was seven lines or something.

Yeah, you have now you have now modelled out free cash flow each year from year one to year 10 of your projection period. So you have free cash flows, we need to bring them back to present value, we need to

discount them. So now you have to choose a discount rate or your required rate of return. A lot of people you know, the market stock market, s&p has returned about 10% per year, over the last 100 years or so a lot of people use 10%, because they want to do at least as well as the market. As they discount those free cash flows by 10%.

And you get the present value of free cash flow each year, for the next 10 years. You sum those up, you sum those up, and you've got the sum value of the present value of free cash flows from year one to year 10, then you have to use a terminal value formula to get the free cash flows from year 11. To in perpetuity, you also discount those back. And now you add that to your sum of the present values from year one to year 10. You sum them all together, and you get something called enterprise value or firm value, but we're calculating the value of the equity, but the firm value is the equity plus the debt. So from that enterprise value, we subtract that we need to pay back debt holders, there's any cash left over after paying back debt holders, that goes to the equity holders. So we add cash.

So we have enterprise value, minus debt, plus cash, it gives us an equity value. All we have to do now is divide by the number of shares outstanding to get our estimated intrinsic value per share for the equity, then you can run various scenarios, change things up a little in the model, and you come up with what you believe to be a range of fair values. That answer your question.

Dave

42:02

Yeah, it totally does. And I think it shows people that it sounds super complicated, but when you kind of break it down into the parts, there is work that goes into it. But just the whole idea of trading a DCF. And understanding what it tells you when you get done with it, I think is not that complicated once you kind of understand the moving parts and what's involved in trading it and what it tells you. I guess a question that I have about that is you mentioned earlier about fair value, when you do a DCF? Are you looking for a hard fast this company should be worth \$35.12? Are you looking more for a range between four

John

42:40

range? Yeah, and so you can run scenarios. This is a model in Excel. And so if it's built properly, everything connects. And so you can change one cell and everything updates, right. And so it's easy to run these, you know, scenario analysis. And I think one easy way to think about it is to do a bear case, a base case and a bull case, your bear cases, if you think things go wrong, base cases, your is the middle of the road, your highest conviction idea, right?

Your bear case would be when you think revenue grows slower than your base case, and margins are lower than in your base case. And then your bull case, you think revenue could grow faster than in your base case. And margins are lower than in your base case. So you'd come up with three different values of bear case value, a base case value, and a bull case value. And for some companies, this range could get pretty narrow, you know, utility, for example, utilities are regulated. And so we actually know what their growth is going to be if they invest the capex that they have agreed to invest, regulators allow them to earn a certain return on that investment. And that return on that capital base that they have invested, that they've agreed to legally invest will drive a certain level of growth. And that growth is very slow and moderate and predictable, because it's regulated.

So your range for utility could be very, very narrow, pretty much no at what rates are going to grow. utilities don't have a lot of margin expansion. If they did, the regulators would take it away from them. Very narrow range. If it's a startup, that range is going to be very wide. You know, startups are growing very quickly. They have not yet achieved scale. They haven't proven they can achieve scale. They are not yet making any money. They're burning through cash. There's they're not self funding yet, you know, startups are growing 100% a year for example. Well, if it's growing 100% This year, you have no idea how fast can be growing in five years. It could be growing at 100% If we're growing at 10% Literally, it's very difficult. So that range of fair values for you know a fast growing early life stage company is gonna be much wider. Does that

Dave

44:58

make sense? Yeah. Totally All right. So let's jump on the ROIC bandwagon because you mentioned something earlier about No, Pat and how important that was. Can you talk a little bit about what ROIC is and the importance of I guess the to the denominator and the numerator of the formula and maybe how they impact investing?

John

45:19

Absolutely. So return on invested capital. ROIC is a measure of quality and performance, business quality and performance. Okay, the the formula is no pat over divided by invested capital. Technically the formula is no pat over average invested capital but just forget that for now. It's no pat over invested capital, no pat and invested capital are the two most important metrics in corporate finance and valuation hands down, hands down. The reason is because those two metrics are used to calculate return on invested capital to calculate

free cash flow and to calculate economic value added or Evi and ROIC, free cash flow and EBA are really the drivers of intrinsic value.

We said earlier that sorry, my cats biting me. We said earlier that the value of a financial asset what I mean by a financial asset is an asset that generates or has the potential to generate cash flow, the value of a financial asset is the present value of free cash flow a future free cash flow. So, ROI C is calculated as Notepad divided by invested capital. free cash flow is calculated as calculated properly. There's lots of definitions out there but properly as no pat minus new invested capital two metrics just arranged differently. Calculate the two most important metrics ROIC and free cash flow, no pat and invested capital and then finally EBA or economic value added is simply no pat minus your cost of capital times invested capital. So that just added one metric you have no Pat, you have invested capital but you subtract the cost of capital. So these two metrics no pattern and investor capital are used to calculate return on invested capital, free cash flow and economic value added.

That right there means that the two most important metrics in finance and valuation. ROIC is so important because companies with a kind of think of the simplest way to say this, okay, let's say we have two companies with the two companies and they both want to grow. They both aim to grow their earnings per share or their let's say they both aim to grow their earnings at the same rate. They both want to grow at 5% Let's say, okay, but one company has an ROIC higher than the other. One company has an ROIC of 20%. One company has an ROIC of 10%. Okay, the company with the higher ROIC This is extremely important. The company with the higher ROIC can invest less capital to grow at that targeted 5% rate. The company with the higher ROIC doesn't have to invest as much capital to grow at 5%. The company with the lower ROIC has to work so much harder to grow at that same 5% So the company with the lower ROIC have to reinvest more capital to grow at the same 5% It's less efficient, okay. Because the company with the higher ROIC was able to reinvest less capital to grow at the exact same 5% it reinvested less. What does that mean? It means there's more cash flow left over to distribute. There's more distributable or free unencumbered cash flow to companies growing at the exact same rate of earnings. But the one with the higher ROIC has more free cash flow.

So that's why ROIC is so important. It is a driver of free cash flow company with higher ROIC you want to take away quote, companies with higher ROIC generate more free cash flow per dollar of earnings. That's the quote. That's why ROIC matters. Companies with higher ROIC generate more free cash flow per dollar of earnings. In other words, they have higher free cash flow divided by earnings they have higher free cash flow conversion. And as we just said, free cash flow is what drives intrinsic value. So that is why ROIC is so important. Does that make sense?

Dave

50:12

It totally does. It totally does. That's a great explanation and I love that. I love that quote, I'm gonna borrow that that was great. So So, the is it safe to say that an ROIC would be a higher Roc would generally be better than a lower?

John

50:25

Yes, so let's talk about RSA. Any finance textbook will give you three equations, saying that if ROIC is higher than the cost of capital, then growth increases intrinsic value. Okay, if ROIC is higher than the cost of capital, then growth increases intrinsic value. If ROIC is equal to the cost of capital, growth in the business neither created nor destroyed value, growth is neutral and if ROIC is less than the cost of capital growing the business actually destroys value.

This can all be proven mathematically. We just said if ROIC is higher than the cost of capital, all the math you need is like fifth sixth grade math right? That's simple formula ROIC minus cost of capital. Let's say ROIC is 40% That's extremely, extremely good. But let's say ROIC is 40% and the weighted average cost of capital is 10%. Then 40% minus 10% is 30%. That 30% is called your economic spread or your excess return spread. Okay, so yes, all else equal. High ROIC is better than low ROIC. All else equal, a higher economic spread or excess return spread. ROIC minus whack is better than a lower spread. Now, here's where it gets really interesting and all this can be proven mathematically.

Two things I'll point out if a company if it isn't, we're talking about a high quality company here. If the ROIC is higher than the cost of capital, right, let's say the ROIC is 20%, very good return on invested capital and the cost of capital is 10%. Okay, if the ROIC is higher than the cost of capital revenue growth, particularly organic revenue growth is the primary driver of intrinsic value. In fact, Michael Mobizen has written that for most companies, revenue growth is the primary driver of intrinsic value growth. Remember, for this to be true, the ROIC has to be higher than the cost of capital. If that's not true, then growth destroys value.

But for companies that have a high ROIC meaningfully higher than than the weighted average cost of capital, organic revenue growth is the primary driver of intrinsic value growth and here's where it gets really interesting. If a company has a high ROI See, a one percentage point increase in revenue growth creates more intrinsic value growth then does a one percentage point increase in an already high ROIC? Let me say that again, if a company has a high ROI, if the company's ROI C is 40%. Okay, obscenely high, great ROI see a

one percentage point increase in organic revenue growth increases intrinsic value much more than would bringing ROIC from an already high 40% to 41% Next, the last thing I'll say about ROIC, then you can ask me a question.

This is all math. This is math while we proven if a company has a very high ROIC 40% Okay, it should actually sacrifice some ROIC in order to drive meaningfully higher organic revenue growth. So, if a company has ROIC of 40%, okay, and you're doing some screen and you see that it's ROIC has slowly trended down over the last 10 years to 35%. So it went from 40% to 39, and a half to 38 and a half to 38 to 37.8. Whatever slowly, slowly, slowly, trends down from 40% which is obscenely high to 35%, which is still obscenely high, incredible business generating 35% returns on invested capital. Some people may look at that and say, No, this company is in secular decline. But then you look at the growth, and over those 10 years organic growth has accelerated from 4% to 8%.

That company has created tremendous amounts of intrinsic value growth, even though its ROIC slowly declined from a super high level to just a super To just a high level, because it sacrificed a little bit of ROIC in order to generate accelerating organic revenue growth. In other words, it took on some projects that had a slightly lower return on invested capital. But those projects, those investments, had a faster organic revenue growth rate.

Dave

55:22

That's cool. That's really cool. So would that be? Would that be something that Texas Instruments right now is going through a CapEx kind of expansion, building out a factory man that would would that be an example of a potential company that is you are seeing their ROIC come down, and their free cash flow has dwindled as well, because of the investments are making. But I guess, you know, in the future, you're hoping that their revenue growth will accelerate because they have more capacity? Is that would that be an example of something along now what you're talking about?

John

55:55

That would be a perfect example? Yes. Okay. Yes. Yes, if those investments generate a higher normalized organic revenue growth rate, then those investments would have been worth it. All else equal. Yes. Yeah.

Dave

56:12

No, that's awesome. I had not heard that part before. Is that is that a Mobizen? Or

John

56:18

everything? Yes, everything? Yes. No, look, if you want to learn more about this, the truth is you should read Michael Mobizen. You should read about the moderation you should read, you know, McKenzie on valuation, it's just math. They're just all using the same formulas, right? If we want to talk about formulas, there's one that I think every investor should use. And once again, this is middle grade middle school math. One of the thing about ROIC, a company cannot grow faster than its ROIC without taking on outside financing.

So without taking on, you know, debt or issuing new equity. So, if the formula is operating income growth, so earnings growth is equal to ROIC multiplied by the reinvestment rate. Okay, so if ROIC is 20% and the company is reinvesting 100%, it's reinvesting every penny back into growth every penny 100% 20% times 100% is 20%. A company cannot grow that company this company in this hypothetical with a 20% ROIC that is reinvesting 100% of its earnings back into the business cannot grow faster than 20% and not without taking on outside financing. Very, very, very important formula. Operating income growth is equal to ROIC times the reinvestment rate. Yeah.

Dave

57:50

Yeah, that's awesome. So all of a sudden, how would you characterize ROIC? As a way of, I guess, screening for or identifying potential quality businesses? That be I know no metric is no metric is perfect. And you can't just use one you got to use a lot of things. But just as a general rule, would you consider that a way to help you find quality companies to investigate?

John

58:16

Absolutely, you know, there are probably a couple of financial identifiers of companies that may have a sustainable competitive advantage. One of those is a sustainably Hi, all or rising return on invested capital. That's definitely one of them. You know, another one may be a company that has a negative cash conversion cycle, negative working capital. That's kind of a more difficult concept. But if you look at companies like Costco, like Amazon, like Microsoft, earlier in its day, they had these Dell early in its heyday. They had negative cash conversion.

That's probably another sign that the company has some sort of sustainable competitive advantage. Yes, and by the way, so where do I get my ROIC numbers? Where do I get my no patent numbers? Where do I get my invested capital numbers? I use new constructs they cover I don't know if it's 2000 2000 or 3000 companies and they have what I believe to be the most rigorously calculated no pat invested capital return on invested capital return on incremental invested capital return on tangible invested capital and free cash flow and Evi economic value added numbers that I've ever come across. And the reason I say that is because they calculate remember I said no pattern invested capital that Most important metrics because those are the foundation of how you calculate ROIC.

How you calculate economic value added and how you calculate free cash flow. What new constructs does is they calculate both know Pat and invested capital in two different ways using the operating method and the financing method. And they get the exact same number to the penny in both cases. And so this is across 2000 or 3000. Companies, they calculate no patent two ways and they calculate invested capital in two ways. And they get the exact same number. So in that way, it's almost like a mathematical proof that their numbers are right, because they check it with this second calculation.

And then the other thing that they do is they haven't like an audit ability function where you can trace back where they're getting their numbers from in the filings, and you can trace back and see all of the adjustments they've made. And so if you don't agree with an adjustment, for some reason, you know, you could just take it out. But they it's almost like an itemized receipt, you can see every single adjustment they make for no pat and invested capital. And so that's where I get my numbers. And then that, you know, then they use those to calculate return on invested capital and free cash flow. And that's where I get my numbers from.

Dave

1:01:19

Yeah, that's awesome. Yeah, I've looked at their site many times. It's amazing. Yeah, they do a great job, that's for sure. Yeah, that's for sure. We are bumping up against time, is there anything else that you feel like we should chat about real quick, or we could also have you back and another time, if you would,

John

1:01:36

like, I'd love to come back anytime you want. I love what you're doing helping people will invest better, maybe just 30 seconds on justified multiples. So you know, people use P E ratios all the time, they use free cash flow multiples all the time. And either they don't, in a lot of cases don't know how to use them properly, or

they think that P E ratios are a shortcut, which they are and are not worth anything. But while P E ratios and price to free cash flow multiples are a shortcut, they are very helpful if you know that there are three numbers driving the P E ratio.

So you can actually calculate a warranted P E ratio or a justified PE ratio with three numbers, no pat growth, so earnings growth, return on an incremental invested capital, and then risk which flows through the model as positive capital. And so literally, P E ratios start to make sense when you understand these three drivers of the multiple. And you know, Mobis in Michael Mobizen has written about this. And so he gave two examples. This was I think, a year year and a half ago, if you have a company growing No, Pat at 10%, return on incremental investment capital is 20%. And cost of capital is 6.7%. The justified PE is 32.

However, if everything else is the same, so you have a company B return on incremental invested capital still 20%. So high cost of capital still 6%. Same, but it's growing faster than no pack growth is 15% instead of 10%. Well, there the justify PE is 52. Okay, so now I want to say one lesson.

So, you know, if your listeners are saying, Well, geez, a P E ratio of 32 and 52 sounds, you know, really, really high? Well, that's because at the time that Michael Mobizen wrote this article, money was still free, you know, the federal funds rate, the rate, interest rate set by the Federal Reserve was zero bound into the cost of capital was somewhere around 6.7%. But today, the cost of capital is 10%. So if you take those exact same numbers, to justify PE get cut in half, to justify PE for the company growing 10% with the return on incremental invested capital of 20%. But now a cost of capital of 10%. That justified PE is now 17, down from 32 to 17. The justified PE for the company growing 15% with the return on incremental invested capital of 20% and a cost of capital now of 10%. That justified PE is now 24, down from 52. So just increasing the cost of capital from six and a half basically to 10. To justify PE gets cut in half. So I just want listeners understand that there are drivers of these multiples, and if you understand those drivers, the multiples become much more helpful.

Dave

1:04:58

Yeah, that's awesome. I love Matt, I love that. Michael Mobizen is the place to go for just about everything, isn't he?

John

1:05:05

You know, I think he's the goat. Yeah, I think he's the greatest of all time when it comes to talking about corporate finance and valuation Mobizen into modern, which is no secret. Everyone knows that. And they're both putting out a bunch of incredible re education to the world.

Dave

1:05:20

Yeah, free. That's the key word free. Yeah, free. John, this was awesome. So if people want to learn more about you and follow all the great stuff that you're sharing, where can people learn more about what you're doing

John

1:05:31

on Twitter at J. Ro grow? So at J R, O, G. R. O. W, talking a lot about investing in business there. And then hopefully, I have something to announce of what I'm going to be doing next in the near future.

Dave

1:05:48

Awesome. Well, we're looking forward to that. I really, really appreciate you coming in talking to us today. I know I learned a lot. And I know our listeners will learn a lot as well. You know your stuff. And it's very evident as you're teaching all this to us. And please check out his Twitter. It's worth it. I follow him as well. And it's I learn something new from him every day. So it's a lot of fun for me. So everybody, John, again, thank you for your time. We really appreciate you come and join us today. And we'll have you back again and we can talk some more.

John

1:06:15

Dave, thank you for having me. And thank you for the kind words and all the support. I really appreciate it.

Dave

1:06:20

You're welcome. You're welcome. All right, folks. Well, with that. We'll go ahead and wrap up. You guys go out there and invest with a margin of safety emphasis on safety. Have a great week and we'll talk to you all next week.

We hope you enjoyed this content. Seven steps to understanding the stock market shows you precisely how to break down the numbers in an engaging and readable way with real-life examples. Get access today@stockmarketpdf.com until next time have a prosperous day. The information contained just for general information and educational purposes. Only it is not intended as a substitute for legal, commercial, and or financial advice from a licensed professional review, our full disclaimer@einvestingforbeginners.com.