# Cost of Capital – Part Two: Your Cost of Capital Is Higher Than You Think

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If we had to guess, the single most common reason why business owners—whether they be entrepreneurs or families—end up in precarious situations is because they justify investments based on a cost of capital that is too low and therefore, are not adequately paid for the risk assumed.

This error occurs whether the investor is incredibly sophisticated, using a detailed build-up, or someone making a decision by gut, who is implicitly, but not consciously, assuming a cost of capital in their mind.

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(We hope that readers of our Insights never use the latter because of all our convincing arguments against using gut instinct and rules of thumb.)

Furthermore, it is not even the investor's fault. Modern corporate finance theory is confusing at best and misleading at worst in that it does not directly address the difference between the risk of an asset when part of a diversified portfolio and one that stands alone. In reality, there is only one simple question: Are the owners of the business well-diversified or not?

## Our Favorite Food-Processing Executive Returns

When we last left our executive in January, he was on the verge of building a warehouse that would earn his business a 10% annual return. With the academic's help, he had calculated the cost of capital of the opportunity, which was around 9.5%. Since the expected return was anticipated to be higher than the cost of capital, the executive concluded he should execute the warehouse-construction project.

But in the past two months, our ivory-tower academic felt rather uneasy with himself. All the calculations were correct, but something felt off. What if the customers the food executive planned to serve from that warehouse stopped doing business with the company? The warehouse project would become a terrible failure, with the company saddled with lots of debt and no ability to pay it down. "Of course, I instructed my friend the executive to increase the cost of equity to account for all that debt, but it still feels too risky," ponders the academic.

Suddenly, the academic slaps himself on the forehead. He goes and rereads the research that originally introduced CAPM (Capital Asset Pricing Model) and immediately calls up the executive. "Do not build the warehouse," frantically stammers the academic. "Why not? It earns a good return for my business," is the questioning response. The academic musters up his courage and apologizes: "I misinterpreted CAPM and instructed you wrong. You do not get to use CAPM to make investment decisions because the owner of your business is not completely diversified."

## Diversification Matters

Most middle-market business owners, whether they be entrepreneurs or families do not manage a well-diversified portfolio

of wealth. Entrepreneurs might have a portion of their wealth invested in assets other than the family business, but the family business usually makes up a sizeable fraction.

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On the other hand, large pension funds and endowments are incredibly diversified. The allocation of capital they dedicate to any single company is miniscule—far less than one percent of the total assets—and the largest position in their portfolio is likely one of the largest and most diversified companies in the world. They care a lot less about what happens to any particular company because it has an immaterial impact on the overall portfolio. Oftentimes, what is bad for one company in a well-diversified investor's portfolio is good for another company. And that means that the well-diversified investor doesn't care if one project fails. It likely means that another project they own succeeded.

"You see, you and your owners care a lot about whether your food processing company is selling enough product to justify this new warehouse. Your owners will have a meaningful amount of their wealth invested in this warehouse-building project. If a competitor steals one of your customers, the wealth of the business's owners will change a lot. The warehouse project will be a failure, and the business will make less money. There is more risk than a diversified investor faces, so your cost of equity needs to be much higher," explains our ivory-tower friend.

"I don't understand. I thought CAPM told us how much risk I am taking on and tells me how to calculate the appropriate compensation," questions the executive. "How about a different example," responds the academic. "Suppose we own both Microsoft and Amazon. They are competing for a large government contract. If Microsoft wins the contract, its value will go up. Amazon's value will go down. But since we own both stocks, we don't care which company wins the contract. We only care that there is a contract to win because that represents new profits."

"Hmmmmm," contemplates the executive. "So you are saying that if my business's owner owned parts of all the food processing businesses in the world, then this would be a good project to do. I am building this warehouse to meet increased demand for my product, but if my customers leave and go to my hated competitor, my owner wouldn't care in that case. My owner would get the benefit of the competitor's receipt of that additional business ."

"Exactly," enthuses the academic. The executive continues thinking out loud: "But it doesn't entirely make sense. Why is the same project worth different amounts to different parties, which is the effect of a different cost of capital?

## All Businesses are Just Financial Assets

The executive's question, at a fundamental level, is the following: "How do I calculate the opportunity cost of an investment with a lot of project-specific risk?" The answer is simple. "It is easy, you simply compare the overall magnitude of the warehouse-construction project risk against the magnitude of the total stock market risk. After all, your owner's alternative is to invest in the stock market—that's the opportunity cost" clarifies the academic.

"And the project specific risk is always greater than the total stock market risk?" queries our favorite executive. The ivory tower friend exclaims: "Nearly always! The typical company in the stock market is three times as volatile—risky—as the entire stock market. But since what is bad for one company is probably good for another company, owning all the companies is less risky than owning one."

"Okay, so my owners need to think about this business as a financial asset. They can invest in it and take on a lot of risk—probably three times as great as if they invested that money in the stock market instead—or they can invest in the stock market. And if they want to take on all that risk, they could borrow money to invest in the stock market and earn a very high expected rate of return. So, this investment needs to overcome that opportunity cost to be a good investment, not what we calculated previously" states our favorite executive. The academic confirms, "Correct."

Now the food executive pulls out his calculator and computes a new cost of capital using a higher beta (that previously mysterious factor we now know summarizes how many times over we need

to leverage the stock market return to replicate the risk of the considered project) to reflect the risk difference and "Holy smokes!" he yells. "You need to earn an 18% return on your capital, not 10%, in order to justify building the warehouse."

The executive puts his head in his hands and wonders, "If this is true, I need to come up with investment projects that provide a much higher return to justify using the capital. Why was this not known before?"

Our now wise academic tells his friend that "Unfortunately for middle-market business owners, academics have lots of data on publicly-traded companies (which typically have well-diversified owners) and enjoy training corporate finance professionals who invest in and for those companies. What rarely gets told is the caveat: that calculation of incremental risk and required reward does not apply at all to non-diversified owners, like those of your business. So, finance professionals go around calculating six and ten percent costs of capital for privately-held businesses based on those college lectures and textbooks. Put bluntly, many middle-market investors are not receiving adequate compensation for the risk they take on. Survivor bias means there will always be lots of lucky investors, but they are not beating the odds."

## How Should Middle-Market Business Owners Invest?

The required returns on equity and capital for undiversified business owners present a very high investment hurdle. How can executives and owners even invest when the required return for a typical middle-market company is between 15 and 25%?

The answer is that private business managers need to do what they have historically done best—finding small, entrepreneurial, high-return opportunities and projects that their larger competitors are unable to quickly act on or find. There is always a core, high-returning idea that seeds every business to begin with, and it is up to middle-market professionals to continue finding those ideas. When there are no more of those high returning, entrepreneurial ideas left to harvest, it is time to maximize the owner's value and sell the business to a larger competitor or institutional investor with diversified ownership. In our experience, big businesses are great at making large investments that yield low returns and ineffective at making small investments that yield high returns.

On the other hand, some businesses have plentiful opportunities to keep harvesting high returning projects. As an example, we can point to the hordes of asset-light businesses private equity groups scoop up a dime a dozen and pass between themselves for the next twenty years hoovering up every last high-returning opportunity before executing a strategic exit to a peer or an IPO (which puts the asset in the hands of the diversified owners directly). Middle-market investors should not give in to making poor investment decisions based on the belief that there simply are not enough investable opportunities. Those opportunities simply might not be in a familiar form.

This change in framework towards investing for middle market participants hopefully gives our readers a starting point to embark on a successful business journey. However, there are certainly important implications of this mindset shift that investors need to consider when managing their businesses. We will take a look at what a much higher cost of capital means for deciding the appropriate level of financial leverage and what are the new rules of thumb in this brave new investment world.

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