

<CN>Chapter 5</CN>

<CT>Matching Capital to the Three Primary Business Models</CT>

<CS>Make Stuff, Sell Stuff, or Do Stuff</CS>

<QU>You have to learn *why* things work on a starship. – Captain James T. Kirk</QU>

<QA>Wrath of Kahn</QA>

As the CEO of your business, you can surround yourself with technical expertise in sales, marketing, operations, and finance, but you need to know *why* and how they all fit together. You will need a technical or intuitive understanding of profit and capital for each activity in your business.

If you simplify all the business models in the world, they come down to three activities: manufacturing (make stuff), sales and distribution (sell stuff), or providing services (do stuff). You may do one, two, or all three of these activities, but each employs a distinct profit and capital model within the same business. However, if you want to scale your business, you should focus on the one thing you do best.

If you are great at manufacturing but fall short in sales, you should partner with a sales organization. You might be great at selling stuff but not world class at making it, so contract with a manufacturer that can do it better for a lower price. It is not uncommon for technology sales businesses to expand into providing services and fail miserably. They forget to account for service employee downtime that is not billable, and they struggle to interpret fluctuations from project to project because they are not selling tangible items with a consistent margin, as in the sales side of their business. They quickly learn that they need a lot more people in services to generate the same margin as one salesperson. And they struggle with the service value of each employee—a variable human component that does not exist in hardware.

Once I started to categorize all my clients and their business segments into these three categories—make stuff, sell stuff, or do stuff—I saw an amazingly consistent set of metrics across all businesses of each type. These metrics help businesses with multiple types of activities

understand where they make the most profit so they do not sacrifice their success in the pursuit of an activity they are ill-suited for or in which they would have to sink money into fixing things.

## Comparison of Make Stuff, Sell Stuff, and Do Stuff Models

Let's start our comparison of the three business models from a familiar point of reference, profit and loss, as shown in table 5.1.

Table 5.1 Profit and loss comparison for businesses that make stuff, sell stuff, and do stuff

<b>Simple Numbers P&amp;L Model</b>		<b>Make</b>	<b>Sell</b>	<b>Do</b>
Revenue		4,400,000	40,000,000	10,000,000
Cost of Goods Sold		1,800,000	34,650,000	500,000
<b>Gross Margin</b>		2,600,000	5,350,000	9,500,000
	<i>as % to Sales</i>	59.09%	13.38%	95.00%
Direct Labor		900,000	1,100,000	4,750,000
<b>Contribution Margin (CM)</b>		1,700,000	4,250,000	4,750,000
	<i>as % to Sales</i>	38.64%	10.63%	47.50%
	<i>dLER (GM / Direct Labor)</i>	2.89	4.86	2.00
<b>Operating Expenses:</b>				
Facilities		240,000	270,000	890,000
Marketing		36,000	180,000	160,000
Management Labor		450,000	1,500,000	1,100,000
Payroll taxes & benefits		180,000	400,000	800,000
Other operating expenses		100,000	430,000	600,000
<b>Total Operating Expenses</b>		1,006,000	2,780,000	3,550,000
	<i>as % to Sales</i>	22.86%	6.95%	35.50%
	<i>mLER (CM / Management Labor)</i>	3.78	2.83	4.32
<b>Net Operating Income</b>		694,000	1,470,000	1,200,000
	<i>as % to Sales</i>	15.77%	3.68%	12.00%
	<i>as % to GM</i>	26.69%	27.48%	12.63%
<b>Other Income (Expense):</b>				
Interest income		1,000	1,500	3,000
Depreciation		(100,000)	(75,000)	(50,000)
Reinvestment Expenses		-	(150,000)	(100,000)
Other expenses		(10,000)	(5,000)	(15,000)
<b>Total Other Income (Expense)</b>		(109,000)	(228,500)	(162,000)
<b>Net Income</b>		585,000	1,241,500	1,038,000
	<i>as % to Sales</i>	13.30%	3.10%	10.38%
	<i>as % to GM</i>	22.50%	23.21%	10.93%

\* dLER is direct labor efficiency ratio. mLER is management labor efficiency ratio. See Chapter 8 for a detailed discussion on LER.

The first thing to notice is the wide variation of gross margin. This is a prime example of why revenue is vanity, profit is sanity, and cash is king!

There is also a wide variation in the contribution margin as percentage to sales and the direct labor efficiency ratio (dLER). The management labor efficiency ratio (mLER) is a little tighter, but it still varies a lot. Net income as percentage to sales varies widely, but notice that two out of three columns are essentially equal to net income as percentage to gross margin. That is still not a universal indicator, but it is worth paying attention to.

Let's dive into each example.

## <H2>Make Stuff</H2>

The company in the "Make Stuff" column of table 5.1 is ultimately a \$2.6 million manufacturing business. When you think about it, the cost of goods sold (COGS) is just a pass-through. If a customer wanted to use all their manufacturing capacity and said they would buy all the materials and supplies for everything the company makes, and if they asked the company for a manufacturing services quote, the price should be \$2.6 million (all things being equal).

The company might quote a lower price because the customer would be taking all the risk on materials and supplies, but I would encourage them not to do that since none of their operating costs would change. What does change is the amount of inventory they would need to carry. They might be able to lower the price some depending on how much less capital they need to deploy. But hold that thought; we will evaluate it when we look at the sell stuff model.

## <H2>Sell Stuff</H2>

The "Sell Stuff" example in table 5.1 is based on a distributor model. At first glance, you wonder how the company survives on a 13% gross margin, but you can see that of the three businesses in table 5.1, they have the highest net income as percentage to gross margin at 23.21%. Once again, the harsh reality is that this business owner does not have a \$40 million business. It is a \$5.35 million inventory management company. To work on a margin this thin, they have invested in the best inventory management systems, processes, and automated handling capabilities. They

are world class in their ability to execute a repetitive process because there is not enough margin for error—literally!

I often tell my clients who sell stuff that the accounting process for inventory is theoretically very simple, but less than 5% of businesses who have inventory are good at it. Most businesses get close, true up the difference once a year (quarterly at best), and slug an unknown variance that no one can explain into COGS. Does that sound familiar to anyone?

You could break down a selling stuff model into two segments: businesses that never handle inventory (or only what has already been sold so they can fulfill orders), and businesses that carry stock with no specific customer to buy it. From a capital perspective, if you stock your items, you carry more inventory and typically get paid at sale or carry lower accounts receivable. If you sell items that other companies fulfill, you will typically have higher accounts receivable waiting to get paid, which trades off the carrying cost of inventory. The worst capital structure is when a business gives corporate terms of 30-plus days on accounts receivable and also carries inventory. In that case, the business needs a really high profit margin to be viable because of the capital signature.

## <H2>Do Stuff</H2>

While the “Do Stuff” business in table 5.1 has a nice profit in dollars, it is the hardest to scale because there is very little COGS pass-through; it includes only subcontractors and materials. In this case, a subcontractor is a person or a company that performs a portion of the service at a rate of 130% or more than what you would pay one of your employees to do the work. If you have freelancers or use a staffing company to provide direct labor, they should be shown as direct labor. Once the rate charged by a subcontractor exceeds 130%, you are essentially leaving enough margin in what you are paying to require some management oversight, and those costs should be accounted for as a pass-through in COGS.

A services business generally has to get significantly more gross margin (and revenue!) to match the net income as percentage to gross margin of the other business types. Operating expenses as percentage to sales tends to be significantly higher than the other models. All of this leads to an underwhelming net income as percentage to gross margin, as compared to the other two business

types. I have some services clients that can get to 20% or higher net income as percentage to sales, but they struggle to maintain it, and they struggle even more to scale it. There are only so many customers that will pay the kind of prices that produce that much profit.

The thing you need to know is which of these business models you would rather have. What defining question does the data need to answer?

## <H2>The Defining Question</H2>

The typical entrepreneur is profit and loss myopic. They look at gross margin, they look at how much labor they have to manage, they look at net profit, but they rarely look at the balance sheet. They speak of cash flow, but that is just the change in the balance sheet items, and it does not encompass everything they need to know.

<PQ>The defining question: What is the ROIC for each business model?</PQ>

The real question you need to ask of the data is, What is the return on invested capital (ROIC) for each business model? Before you can answer that question, you need to understand the four types of capital.

## <H1>Four Types of Capital</H1>

Every business model has a capital signature that is influenced by the type of capital required to run that model. They have common characteristics, which explains why one business with gross margin of 13% can thrive while another business fails at that same percentage. A business can have 20% net income and go broke without outside investment to support it.

Let's take a look at the four types of capital:

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- Trade capital
- Infrastructure capital
- Buffer capital

- Launch capital

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## <H2>Trade Capital</H2>

The term “working capital” has always bothered me. It is taught in accounting school, and bankers have faithfully beat up their borrowing customers with that metric for years. Working capital is defined as current assets minus current liabilities. It seems simple enough, but it tells an incomplete truth. Working capital contains two items: cash on the asset side, and line of credit on the debit side. I choose how much cash I keep in the business and how much I decide to put in or take out. I choose whether to borrow funds from the bank or put my own cash in to support accounts receivable and inventory.

Because my firm models every business we work with, I started looking into this deeper and realized there was a clear subcomponent of working capital lurking below the surface. Trade capital is working capital with cash and line of credit (all short term debt) stripped out. It is the net of accounts receivable, inventory, and work in progress less accounts payable, accrued expenses, and deferred revenue. The resulting number tells you how much recurring income you will have at this volume of sales. Unless you act to change terms with vendors and customers, trade capital will remain constant in your model, and we use it to predict cash flow from operations rather than needing to predict each individual line of trade capital for forecasting.

It was eye opening to discover that the easiest way to predict operating cash flow is not the action of the individual trade capital components, but the harmony of how they interact and I only need to look at the net number. By looking at the net number, it also helps my strategy decisions. For example, I can worry about inventory levels, but when my vendors give me good enough terms that I have no real net cost of carry, why would I ever risk being out of stock?

This is the weakness of the traditional balance sheet presentation. If I were to redesign it, I would net the elements of trade capital in one group, instead of putting assets on the left and liabilities on the right. For all our clients, we add this net number in our balance sheet presentation, then we show trade capital as a percentage of rolling 12 revenue. The power of this calculation is amazingly simple:

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- If your trade capital percentage to revenue is lower than your net income percentage to revenue, you are in the cash-free growth zone. You can accept growth and not burn cash as long as net income percentage is higher than trade capital percentage.
- If your trade capital percentage to revenue is higher than your net income percentage to revenue, you have to use the base camp growth method. To grow, you will burn cash to invest in accounts receivable or inventory; you can grow only as far as your cash and debt resources allow. Then you pause for a time to let the cash flow catch up, and you let it build it for another growth run to the next base camp.

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This is why some companies have linear growth and others have a growth spurt, flatten out, and have a growth spurt again.

## <H2>Infrastructure Capital</H2>

Infrastructure capital is easy to understand because it is the cost of your fixed and intangible assets net of the debt that supports particular assets, which normally includes equipment, furniture, and building and leasehold improvements. It also includes intangible assets in a business purchase of goodwill items.

In this case, the proper utilization of debt can make a huge difference in the return on investment. In a typical scenario, the bank wants you to put about 20% down on real estate and somewhere between 0% and 20% for leasehold improvements and equipment, depending on your credit history. We accountants make this a lot harder than it needs to be, as I describe in the following real-life scenario.

Suppose you go to the car dealership and buy a truck for your business that costs \$50,000. To get the best financing rate, you pay \$5,000 down and drive away with the truck. Your accountant asks you what the \$5,000 purchase was for that is booked to fixed assets, and you tell them about the truck purchase. This sets off a series of accounting adjustments:

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- Fixed assets are debited for \$45,000 to get the full asset value, and \$45,000 is credited to book the note payable.
- Each payment on the note is recorded. A credit is booked to the expense account where the note payment was recorded until the accountant found out about it, a debit is booked for the principal portion, and a debit is booked for the interest portion.
- Depreciation is booked, which should be done monthly but is usually done once per year. Most businesses book it as tax depreciation instead of true book depreciation over the useful life of the asset.

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You can see why entrepreneurs hate accounting and easily get confused. If you book the down payment to an expense account called truck expense, and you book each note payment to truck expense, you would end up with *exactly* the same outcome over the life of the asset with a third of the accounting entries (this is essentially equivalent to the old rules of booking an operating lease). Certainly, this would be a violation of generally accepted accounting principles, but it would be closer to economic truth and easier to read and understand. If you had to send the bank a financial statement, you would note the departure of accounting process and let them know the current balances on the equipment notes. The bank already ignores the book value of fixed assets and looks at the market value for your equipment.

I do not expect my thinking to become the standard of accounting presentation, but it is necessary for entrepreneurs to grasp ROIC concepts. Here is a real-life story to illustrate the point.

A retail store client visited our office for a planning day. For their first five stores, they paid for the buildouts with their own funds to the tune of \$200,000 to \$300,000 each. We applied the ROIC principle of 50% return standard, and they were just above it. When I modeled the potential return for the sixth store, I had them finance the buildout and treat the payment effectively as rent. As a result, the ROIC potential on that store shot up to 200%! Essentially,



financing the buildout and converting it to an operating expense removed a huge barrier to scaling and provided an incredible ROIC. I told the client to be mindful that if the store fails, they will still have to pay the debt, but they will also have to pay the rent for the term of the lease. There is economically no difference, so it can be accounted for in the same way if you are looking for economic reality instead of traditional accounting presentation.

## <H2>Buffer Capital</H2>

In my first book, *Simple Numbers, Straight Talk, Big Profits!*, I established a cash standard for all businesses. It says that cash should always be equal to two months of operating expenses and zero drawn on a line of credit. Essentially, any expense you do not get terms on would be part of this calculation (all labor and operating expenses). The way I arrived at this was to research four years of client data and look for the deepest negative cash flow cycle in any given month. For a normally operating business, I never saw a dip greater than two months of operating expenses.

As we started sharing this metric and driving our clients to use it, we realized the best part was that entrepreneurs could easily see how much cash is enough and how much cash is too much. It clearly defined what it looks like to be fully capitalized. I am fine with debt, and I even encourage it when it matches the true useful life of a productive asset like buildings and equipment. But the perpetual financing of trade capital assets, such as accounts receivable and inventory, put severe constraints on a well-functioning business.

My approach was proven in 2008. The media was full of reports about lines of credit being pulled from businesses, but my clients were not concerned. Instead, they asked me how to protect their cash in such a crazy market. I then realized they had been listening. In the three years that followed, while everyone was complaining about a recession, my clients enjoyed some of their most profitable years because they had cash and, therefore, market power. Because of the recession, their growth was limited to taking over competitors' accounts, but they fared better than those who went out of business because of being overleveraged.

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<BT>Debt Roulette</BT>

In his book *Fooled by Randomness*, Nassim Nicholas Taleb says that trusting the market is like playing Russian roulette for \$100,000 per pull. You might get lucky and get ahead by \$1 million, but eventually you die. This is how debt goes bad. You go to the well once too often, and that final push takes you down.

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Over my years of monitoring the cash standard, I have seen a few businesses struggle to maintain two months of cash and meet the ROIC standard. Staffing companies are a great example. We have several clients in this industry, and many have to rely on factoring invoices to manage cash flow. However, one client faced the challenge by asking for, and receiving, up-front payments. Sometimes you just have to ask! Some markets will not allow this, but be creative. Bill quickly, bill often, and if you can get either a deposit or a retainer, you will significantly lower your capital requirement and boost your ROIC.

<H2>Launch Capital</H2>

I refer to launch capital as the magic pixie dust for scaling business. The magic comes from its elusiveness, buried in your financial data, and only entrepreneurial wizards who have a gut for business know how to use it. My mission is to level the playing field for all entrepreneurs, so here is how to become a wizard.

Simply speaking, launch capital is the operating losses you incur before a business activity becomes profitable. It is most easy to understand at initial launch, but it continues throughout the life of your business as you scale or respond to new competitive pressures of the market. This chapter discusses capital for initial launch, and chapter 6 is all about launch capital during a growth phase.

I was giving a speech to a group of entrepreneurs, and a successful business owner was in attendance, whom I will call Bob. I did not know his numbers, but I had been told he was a great businessman who had 15 auto service stores, and a good mentor to the group. Bob consented to let me use him as an example of the ROIC concept and let me see how good my guesses were!

I said, “Bob, my guess is that it will cost you about \$1 million for the dirt and the metal building to put up a new store.” He agreed, and I continued: “The bank will finance 80%, so you will need \$200,000 of your own money to put down.” He agreed again. “Once the building is complete, you will have about \$200,000 of opening costs and operating losses to cover until the store breaks even.” Bob paused, smiled, and said, “Yep, that is exactly what we budget.” I continued with the final piece: “Your go/no go decision for this location will be based on whether you think there is enough traffic to get this store to produce at \$200,000 net profit run rate within 12 to 24 months. It will take you the first 12 months to get going, but you should get to at least \$200,000, an average of \$16,666 per month, by the 12th month or sooner, but no later than 24 months.” After I finished, Bob gave me one of the best compliments I have ever received: “What you just told me in two minutes took me 20 years to figure out!”

Bob is a business wizard. He does not need accountants to tell him how to run a business; they only need to handle his compliance work and provide data to other people because he knows his numbers in his gut. I hope these concepts help passionate entrepreneurs who do not have a gut for numbers build successful businesses.

The two parts that entrepreneurs miss are correctly calculating the launch capital needed for start-up costs and the operating losses they need to cover until they break even. The operating losses require capital just like buildings and equipment, but they are accounted for on the profit and loss statement, not on the balance sheet. To effectively see this requires a nonstandard presentation of financials to first predict the losses, then to measure your return for making that investment. It is also easy for entrepreneurs to predict the best-case scenario and not be prepared for the worst case.

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<BT>Case Study: The Importance of High Return with High Risk</BT>

Several years ago we had a client who needed to open new offices in other cities to grow their respiratory care business. We correctly estimated that they would have \$150,000 of launch capital invested before the location would break even. They launched the first location and were about \$60,000 into it when they realized the political alignments of the needed referral sources

were not likely to make this location a success. They abandoned the office and got out of their lease (fortunately, they negotiated a reasonable up-front penalty in case they needed to leave).

They picked the next city and tried again. The same issues came up when they were about \$75,000 into it, and once again they pulled out. The third location worked out. The new office was profitable well before the \$150,000 was spent. That location produced over \$750,000 of profit for several years, making it a great return on investment even if you include the two misses.

This is what business is all about. You may realize by now that growing a business is really running a legal gambling enterprise! You need a high return because the risk of failure is real. If you take the return potential out of business (including higher taxes), failures increase and investors look for other places to put their money and effort. Learn to make good bets and cut losses quickly to save your cash for another try.

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<H1>Capital Signature</H1>

Now that we have an understanding of the four types of capital, and before we dive into launch capital for the growth phase of a business in chapter 6, let's look at the capital signatures for businesses that make stuff, sell stuff, and do stuff. Table 5.2 shows this breakdown and is a continuation of table 5.1, where we looked at the profit and loss for each business type.

<TN>Table 5.2</TN> <TT>Capital signature for businesses that make stuff, sell stuff, and do stuff</TT>

## 4 Needs for Capital

	Make	Sell	Do
Net Income	585,000	1,241,500	1,038,000
as % to Revenue	<b>13.3%</b>	<b>3.1%</b>	<b>10.4%</b>
<b>Trade Capital</b>			
Accounts Receivable	542,465.75	2,191,780.82	1,232,876.71
Inventory	295,890.41	2,847,945.21	-
WIP	-	-	410,958.90
Accounts Payable	(295,890.41)	(4,271,917.81)	-
Deferred Revenue	-	-	(1,095,890.41)
Net Trade Capital	542,465.75	767,808.22	547,945.21
as % to Revenue	<b>12.3%</b>	<b>1.9%</b>	<b>5.5%</b>
Infrastructure Capital (net of debt)	250,000.00	750,000.00	100,000.00
	12.3%	3.10%	5.47%
Buffer Capital	317,666.67	646,666.67	1,383,333.33
Required Capital	1,110,132.42	2,164,474.89	2,031,278.54
ROIC	<b>53%</b>	<b>57%</b>	<b>51%</b>

### <H2>Make Stuff Capital Signature</H2>

In the make stuff model in table 5.2, you can see that trade capital includes accounts receivable and inventory less accounts payable. This model works for cash flow because vendors are willing to carry terms on inventory, so the company does not have to pay for inventory until it is used. Many manufacturing companies also have work in progress if the item they make has stages to its completion.

Notice that the trade capital percentage to revenue is 12.30% and the profit percentage to revenue is 13.30%. This means the company essentially breaks even for cash flow on growth. If they decide to accept a lower percentage of profit to grow, say 10%, they would grow in a cash-negative cycle that would limit their growth potential. The only thing they could do then would be to use the base camp approach to growth I described earlier—use only their existing cash plus line of credit, wait for their cash to catch up and build, then grow again.

## <H2>Sell Stuff Capital Signature</H2>

The sell stuff model in table 5.2 represents a distributor, and they carry inventory and receivables. They run a tight ship on collections and inventory turnover, so their vendors fund almost all of their receivables and inventory. You can see that they are slightly better on trade capital percentage to revenue and net income percentage to revenue. This means that, for now, they can grow their profit and cash equally, but they cannot let any trade capital components go negative on them or it collapses quickly. When the percentages are very small, it requires even closer monitoring than normal to not let it flip and go cash negative.

Some distribution companies only sell products and never take possession of the items they sold. In many of those cases, their profit margin is very low and they have to give longer terms, which often negates the benefit of not carrying inventory. I can still see this as a better play if a company is not good at building a team of people to effectively manage inventory. In table 5.2 you can see that they have a significantly higher infrastructure capital number than the other two models because of their inventory management equipment and software investment, such as bar coding and radio-frequency identification (RFID) capability.

## <H2>Do Stuff Capital Signature</H2>

In table 5.2 you can see why businesses that do stuff struggle with ROIC. If this services business did not have deferred revenue, their ROIC would be close to 33%. Based on public markets, that would be OK, but it underperforms all other models and explains why service firms break up easily and often fail to scale. They do not have an understanding of their capital requirement or the discipline to meet a capital goal, even if they have one. Many professional services firms we work with have a hard time breaking away from the old model of stripping all their cash out each year and living on their line of credit until they pay it back. To expose the weakness in this approach, all it takes is one year where the balance on the line of credit does not go down and there is no cash. Their highest-performing employees end up leaving, and they are left with only their weakest performers.

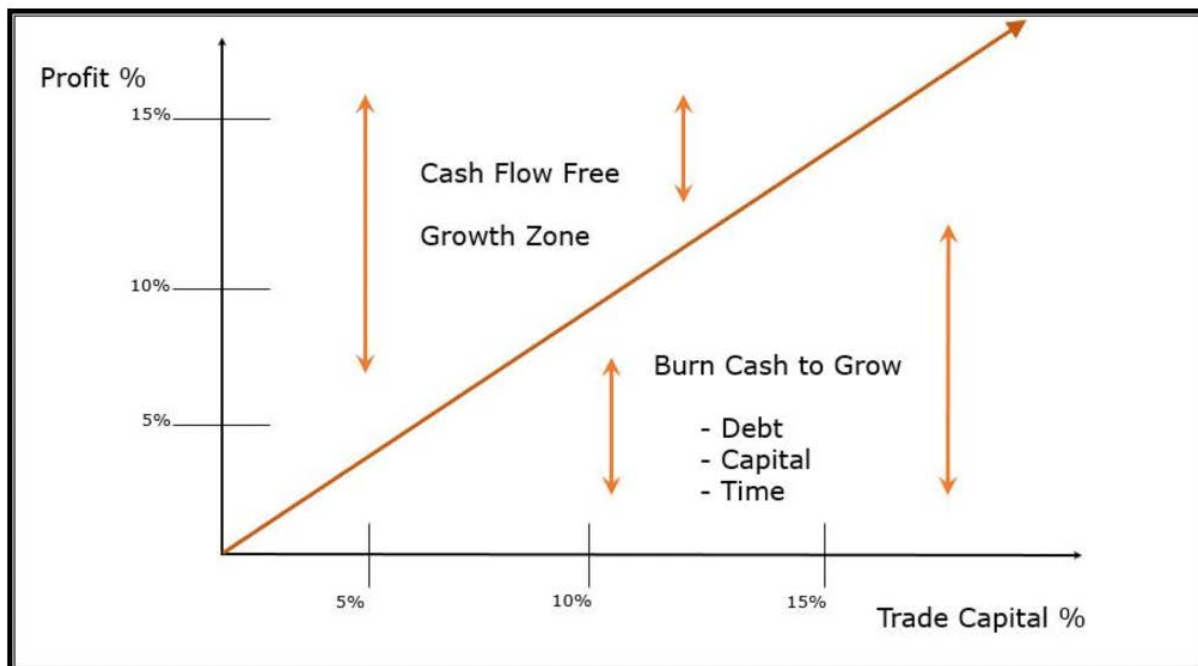
This is one model where I can see a one-month core capital number if a company has a strong recurring client billing. But if the billing can be random and lumpy, they should commit to the two-months rule.

The company in table 5.2 is in a cash-free growth zone due to the deferred revenue. Once again, if the deferred revenue ever goes away, their trade capital would jump to roughly \$1.5 million with the same profit of roughly \$1 million (their trade capital percentage to revenue would be 15%), and they would run out of cash while they are waiting to get paid. Instead of growing quickly, they would need to need to use the base camp approach to growth.

## <H2>CPR: Cash Power Ratio</H2>

To drive home the picture of the cash-free growth zone, we created the Cash Power Ratio (CPR) in Table 5.3.

## CPR: Cash Power Ratio



If you plot your Profit % to Revenue against your Trade Capital % to Revenue, you can see where you fit on the Cash-Free Growth Zone. It has been fascinating to see businesses adapt their profit and capital approach to their business once they see this.

## <H2>Growth with Outside Capital</H2>

If your trade capital percentage to revenue is greater than your profit percentage to revenue, you can look for outside capital to help. The problem is that private equity firms are usually not interested unless they can deploy large amounts of investment with very predictable returns. They seem intrigued at first, especially if you utter the words “recurring revenue,” but they get nervous if you continue to chew through cash as you grow. In some cases an investor can take a recurring revenue stream and make a fixed yield on it, but those opportunities are hard to come by unless the revenue stream is a strong contract.

Outside investors seem to be interested in funding launch capital spending to move the needle on your sales and bring it up to speed, where it requires less catalytic spending to keep the momentum going. If an investor is going to spin the roulette wheel of growth, it better have a big upside—or at least your story should sell that idea!

## <H2>The Defining Question Revisited</H2>

Earlier in this chapter we formed a defining question: What is the ROIC for each business model? We can see in table 5.2 that the make stuff, sell stuff, and do stuff models have a similar ROIC, but the sell stuff (distribution) model wins by a nose! However, the make stuff (manufacturing) model has the least amount of volatility if any of the trade capital items shift toward the negative (such as if customers take longer to pay or vendors require payment sooner). And, as we saw in the discussion of capital signature for a services business, the do stuff (services) model comes in last in ROIC.

Does this mean that the sell stuff model is the winner? On paper, the answer is yes. But, like most things in life, it depends. Regardless of which type of business you have, a solid



understanding of three business models, the types of capital, and your capital signature will help you succeed and make your model best in class.