



Using Debt to Fuel Value Creation

By [Chris Angelatos, Associate](#)

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Synopsis: The key measure of financial success for a business owner is value creation. Shareholder value is created when the return on invested capital in the business exceeds that business' cost of capital. We find that owners of mid-sized businesses often have ample high-return investment opportunities that are not pursued because they perceive capital to be scarce. Shareholder value creation often suffers as a result. Read on for our views on why debt is the indispensable value creation tool...



Using Debt to Fuel Shareholder Value Creation

Many business owners are averse to using debt to fund expansionary efforts. It can certainly be a risky proposition, especially if the difference between the cost of capital and the expected project return is slim. However, the typical business owner we speak to has a 2-year payback threshold when considering investing in a project. That equates to a nearly 50% compound annual returns on capital (or internal rate of return, “IRR”). When you consider that the prime lending rate is typically in the 3-5% range, and banks frequently lend to private middle market companies at pricing around prime plus 1-3%, it quickly becomes highly profitable to use debt to fund these projects.

Let’s consider a situation where you have a company with the following characteristics:

Table 1: Sample Company Characteristics

Starting Inputs	000s
Revenue	20,000
EBITDA Margin	15.0%
Debt	
Amortization	5 years
Interest	7.0%
Equity	
EBITDA Multiple	6.0x

Under debt-free circumstances, this company’s revenue grows at 5% per year as there isn’t capital available to fund significant expansion projects. With additional capital, however, the company can fund initiatives that will grow revenue by 15% per year, up from 5%. We’ll consider a situation where \$9 million in debt capital is required to fund this growth (of which 20% is paid down each year, including Year 1). General assumptions for CAPEX, working capital, and taxes are used to arrive at a more realistic cash flow figure. Let’s see what happens to the value of the company under both scenarios.

Table 2: Equity Value Growth of a Debt-Free Company Growing at 5% Annually

Debt Free, 5% Growth	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Revenue	\$20,000	\$21,000	\$22,050	\$23,153	\$24,310	\$25,526
Margin	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
Growth Rate	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%
EBITDA	3,000	3,150	3,308	3,473	3,647	3,829
Multiple	6.0x	6.0x	6.0x	6.0x	6.0x	6.0x
Enterprise Value	18,000	18,900	19,845	20,837	21,879	22,973
Less: Debt	-	-	-	-	-	-
Plus: Cash	-	1,733	3,552	5,462	7,467	9,573
Equity Value	18,000	20,633	23,397	26,299	29,346	32,546

Now let’s see what happens to the company that borrows to make the growth investment. We assume 7% interest, and that 100% of available cash flow goes to pay down debt.

**Table 3: Equity Value Growth of a Company Using 3.0x Leverage to Grow at 15% Annually**

3.0x Leverage, 15% Growth	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Revenue	\$20,000	\$23,000	\$26,450	\$30,418	\$34,980	\$40,227
Margin	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
Growth Rate		15.0%	15.0%	15.0%	15.0%	15.0%
EBITDA	3,000	3,450	3,968	4,563	5,247	6,034
Multiple	6.0x	6.0x	6.0x	6.0x	6.0x	6.0x
Enterprise Value	18,000	20,700	23,805	27,376	31,482	36,204
Less: Debt	-	7,031	4,526	1,387	-	-
Plus: Cash	-	-	-	-	1,809	5,128
Equity Value	18,000	13,669	19,279	25,989	33,291	41,332

The equity returns for each case are summarized in the table below. The company that levers up and invests in growth creates greater shareholder value.

Table 4: Equity Returns

Cash Flows	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Debt-Free	(18,000)	-	-	-	-	32,546
3.0x Leverage	(18,000)	-	-	-	-	41,332
IRR						
Debt-Free	12.6%					
3.0x Leverage	18.1%					

Even with the conservative assumption of this debt increasing growth by only an incremental 10% (a far cry from a two-year payback), the project funding scenario creates more value to shareholders than choosing the low-growth route to remain debt-free.

In addition, the interest rate has a miniscule impact on the equity returns. In the leverage case, every 1% increase in the interest rate decreases IRR by 0.1% and decreases the equity value in year 5 by \$157,000. For the additional debt scenario above to create the same shareholder value as the no-debt option, the interest rate has to be 29.9%. For a lender to charge this much to provide financing, they would have to perceive the business to be riskier than unsecured consumer credit cards.

Table 5: Impact of Interest on Equity Returns

Interest Rate	IRR	Exit EV
5.0%	18.3%	\$41,625
7.5%	18.0%	41,255
10.0%	17.8%	40,841
12.5%	17.5%	40,378
15.0%	17.2%	39,861
30.0%	12.5%	32,392

Conversely, of course, if investing \$9 million in a business fails to increase its growth, then the returns to shareholders will be lower, and taking on debt at higher interest rates can be risky for a business (i.e. cause covenant breaches). The minimum growth threshold to make shareholders



better off with this additional debt load versus the base case is 10.1%. The table below summarizes the impact growth has on value creation in the 3.0x leverage case.

Table 6: Impact of Growth Rate on Equity Returns

Leverage Case		
Growth Rate	IRR	Exit Equity
5.0%	6.2%	\$22,973
10.0%	12.2%	28,989
15.0%	17.9%	36,204
20.0%	23.5%	44,790
No Leverage Case	12.6%	32,546

While growth clearly impacts shareholder returns and interest rate impacts are small, what else impacts equity returns? A leveraged buy-out (“LBO”) analysis allows one to compare the effects of various factors on the returns of a project or acquisition. Under all cases, we are examining the aggregate equity returns for someone purchasing a hypothetical business at its current value using a mixture of debt and equity and selling it in five years. The table below shows a “base case” LBO analysis, using standard assumptions to more accurately calculate cash flows.

Table 7: Base Case LBO Analysis, 3.0x Leverage, 7% Interest

Base Case IRR	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
EBITDA	3,000	3,000	3,450	3,968	4,563	5,247
Working Capital		(400)	(460)	(529)	(608)	(700)
CAPEX		(400)	(460)	(529)	(608)	(700)
Debt Repayments		(1,627)	(2,087)	(2,632)	(2,655)	-
Interest		(573)	(443)	(278)	(93)	-
Taxes		-	-	-	(150)	(962)
Free Cash Flow		-	-	-	449	2,886
EV						
EBITDA	3,000	3,000	3,450	3,968	4,563	5,247
Multiple	6.0x	6.0x	6.0x	6.0x	6.0x	6.0x
EV	18,000	18,000	20,700	23,805	27,376	31,482
Plus: Cash	-	-	-	-	449	3,335
Less: Debt	(9,000)	(7,373)	(5,286)	(2,655)	-	-
Equity Value	9,000	10,627	15,414	21,150	27,825	34,817
Purchase/Sale Price	(9,000)	-	-	-	-	34,817
IRR	31.1%					

In the below sensitivity tables, we apply the typical LBO analysis in order to examine the effects of interest rate, leverage, growth rate, and EBITDA margin on the equity returns. Leverage has a significant impact, significantly increasing the returns the more debt is used to complete the purchase, while interest on the debt has a very small impact. For example, assuming a 10% interest rate and 3.0x leverage, increasing leverage from 3.0x to 4.0x increases IRR from 30.6% to 38.4%,



while decreasing interest rate from 10% to 5% increases the return from 30.6% to 31.3%, a minute increase.

Table 8: Impact of Leverage and Interest on Equity Returns

		Leverage				
		1.0x	2.0x	3.0x	4.0x	5.0x
Interest	5.0%	21.8%	25.8%	31.3%	40.1%	57.2%
	7.5%	21.8%	25.7%	31.0%	39.4%	55.5%
	10.0%	21.8%	25.5%	30.6%	38.4%	53.4%
	12.5%	21.7%	25.4%	30.2%	37.0%	50.8%
	15.0%	21.7%	25.2%	29.7%	35.4%	47.5%

As with total leverage, growth rate and EBITDA margins have a dramatic impact on returns (3.0x leverage is assumed for all cases).

Table 9: Impact of Growth Rate and EBITDA Margins on Equity Returns

		Growth Rate				
		0.0%	5.0%	10.0%	15.0%	20.0%
Margin	-5%	(6.6%)	1.5%	8.4%	14.5%	20.2%
	Flat	15.2%	20.7%	26.0%	31.1%	36.0%
	+5%	25.9%	31.2%	36.3%	41.3%	46.2%

We can quantify the incremental impact of each change, shown in the table below. Leverage and margins have the largest impact on equity returns, relative to the other factors. The figures below are percentage point impacts (not percentages of percentages), meaning if base case equity returns are 10%, and margins increase by 1%, equity returns will increase to 13.25%.

Table 10: Incremental Impact on Equity Returns of Various Factors

For Every:	Increase In:	Equity Returns Increase (Decrease) By:
1%	Interest Rate	(0.012%)
1.0x	Total Leverage	7.61%
1%	Growth Rate	1.04%
1%	Margins	3.25%

If interest has little to no impact, why not use debt to fund growth in your business? From a shareholder value standpoint, it's a no-brainer.



Measuring Shareholder Value Creation through Project Analysis

Let's consider a project with a two year pay-back. What are the shareholder value implications of forgoing this investment due to a lack of capital?

Table 11: Opportunity Cost of Forgoing a Project with a Two-Year Payback

in millions	Close	1	2	3	4	5	6	7	8	9	10
Investment	(10)	-	-	-	-	-	-	-	-	-	-
Return		5	5	5	5	5	5	5	5	5	5
Net Cash Flow	(10)	5	5	5	5	5	5	5	5	5	5
Project IRR	49.1%										
NPV ₁₀	\$18.8										

The opportunity cost of not investing in this project is \$18.8 million (at a 10% discount rate). Most mid-sized private companies we talk to have these types of opportunities available to them, but they don't have \$10 million kicking around to fund a project like this. One solution would be to source incremental debt financing. The following assumptions reflect the additional costs:

Table 12: Assumptions for Project NPV Analysis

Assumptions	
Investment	10,000
Payback Period	24 Months
Senior Debt Interest	5.0%
Mezzanine Debt Interest	15.0%
Cost of Equity	30.0%
Discount Rate	10.0%

Equity IRR for a 100% debt-financed project is infinite because no equity is tied up. In these cases, we focus on the NPV of the projects.

The tables below show the effects of funding a two-year payback project with senior debt, mezzanine debt, and equity. Each project example is considered on a 10-year time horizon. Funding the project with mezzanine debt, even with a high interest rate of 15%, is a very lucrative option. Funding the project with equity, however, is much less attractive, given that the cost compounds over the investment horizon.

Table 13: Effects of Funding the Project with Senior Debt, Assuming 5-Year Amortization and 5% Interest

in millions	Close	1	2	3	4	5	6	7	8	9	10
Debt Funded (Amortization)	10.0	(2.0)	(2.0)	(2.0)	(2.0)	(2.0)	-	-	-	-	-
Interest Cost		(0.5)	(0.4)	(0.3)	(0.2)	(0.1)	-	-	-	-	-
Project Cost	(10.0)										
Project Return		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Net Cash Flow	-	2.6	2.7	2.8	2.9	3.0	5.0	5.0	5.0	5.0	5.0
NPV ₁₀	\$22.1										

**Table 14: Effects of Funding the Project with Mezzanine Debt, Bullet Amortization and 15% Interest**

in millions	Close	1	2	3	4	5	6	7	8	9	10
Debt Funded (Amortization)	10.0	-	-	-	-	(10.0)	-	-	-	-	-
Interest Cost		(1.5)	(1.5)	(1.5)	(1.5)	(1.5)	-	-	-	-	-
Project Cost	(10.0)										
Project Return		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Net Cash Flow	-	3.5	3.5	3.5	3.5	(6.5)	5.0	5.0	5.0	5.0	5.0
NPV ₁₀	\$18.8										

Table 15: Effects of Funding the Project with Equity, 30% Cost of Capital

in millions	Close	1	2	3	4	5	6	7	8	9	10
Equity Funded (Payback)	10.0	-	-	-	-	(37.1)	-	-	-	-	-
Interest Cost		-	-	-	-	-	-	-	-	-	-
Project Cost	(10.0)										
Project Return		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Net Cash Flow	-	5.0	5.0	5.0	5.0	(32.1)	5.0	5.0	5.0	5.0	5.0
NPV ₁₀	\$7.7										

Only by Year 8 in the above analysis does the net present value become positive when funding with equity. While equity funding allows you to preserve cash flows, ultimately it is much more costly than debt and can even destroy value in the short-to-medium term for shareholders.

Conclusion

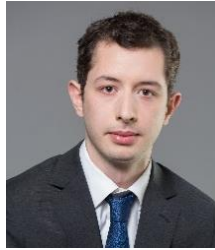
Owners of mid-sized private businesses would be well-served to examine the balance between opportunity costs of foregone growth opportunities and projects and the costs of funding these initiatives. While the cost of debt is a hard number that is easy to quantify and the opportunity costs of action not taken is hard to quantify, the opportunity costs are typically much higher than the financing costs. The prudent use of leverage to finance high-return projects is a widely available strategy that is relatively straightforward and inexpensive to execute. The key is to ensure that the credit used to fund these projects leaves the business with ample ongoing liquidity and flexibility.

About Valitas

Valitas Capital Partners is a Canadian boutique advisory firm that collaborates with passionate business owners to unleash value over time and realize that value through a well-timed exit. Our work is tailored to our clients' unique priorities and circumstances, recognizing the legacy they have built through years of dedication and sacrifice.

Valitas delivers global firm capability from an agile, entrepreneurial platform. Our value creation excellence is rooted in best practices developed by leading global investment banks and private equity firms. We have completed almost 200 M&A and financing transactions with an aggregate value exceeding \$180 billion, including some of the most notable and complex M&A transactions in Canadian history. Clients trust our thought leadership, experience, and privileged access to global networks to identify, evaluate, and execute on their strategic opportunities.

About the Author



Chris Angelatos, Associate

Chris has prior experience in entrepreneurship, having founded a consumer product company while still in school. He developed and launched the company's product in 8 months to 120 stores, reached the podium at three pitch competitions, and participated in numerous accelerator programs. He was trained by the Next 36, regarded as Canada's top entrepreneurial leadership program, developing strategy, innovation, and finance skills.

Chris holds a B.A.Sc. in Engineering Chemistry from Queen's University, graduating a Dean's Scholar and recipient of the L.A. Munro Award.

Contact Us

345 Adelaide Street W, 2nd Floor
Toronto, Ontario M5V 1R5

416.556.8898

www.valitascapital.com