



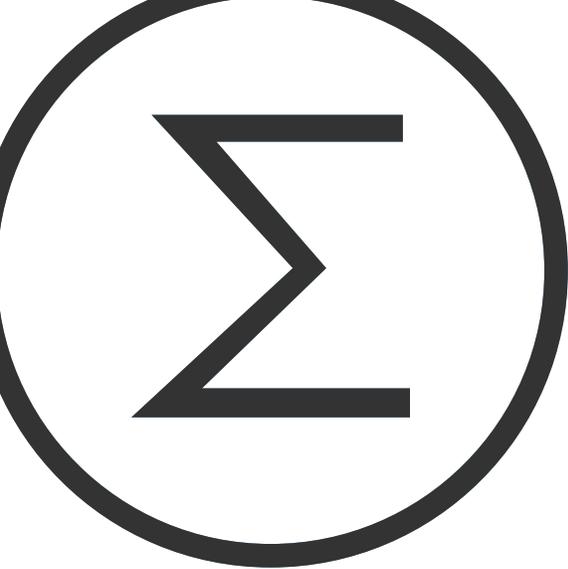
TOP STOCKS FOR 2020



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ABOUT THE TOP STOCKS CHALLENGE

The ideas featured within this report were selected as the 15 Winners and Finalists of the 4th Top Stocks Challenge, an annual investment research competition hosted by SumZero, a global platform of nearly 20K buy-side investment professionals.

SumZero members are investment professionals working at hedge funds, private equity funds, mutual funds, and family offices or are investment professionals with substantial prior fund experience. The complete research history of individuals featured in this report, as well as bios, and work history can be found on the SumZero database.

The 80+ submissions entered into this year's Challenge were independently assessed and voted on by a panel of 31 senior fund professionals and asset allocators. The following, multi-factor criteria was utilized to determine the Winners:

- ✓ VALIDITY OF THE THESIS
- ✓ STRENGTH OF THE SUPPORTING ARGUMENT
- ✓ FEASIBILITY OF THE TRADE
- ✓ ORIGINALITY

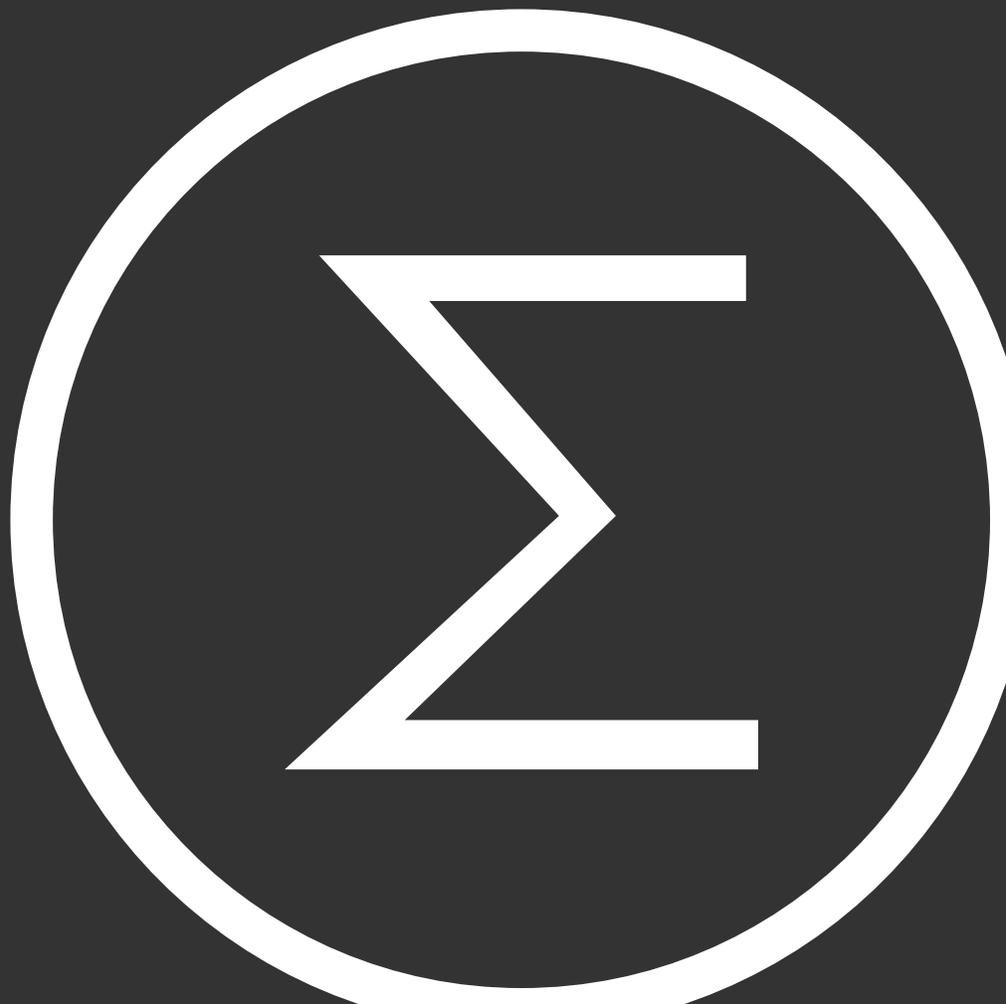
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SPECIAL SITUATIONS

Special situation opportunities with a tangible trigger event. Potential catalysts include bankruptcy, spin-offs, litigation, regulatory changes, etc.





WINNER SPECIAL SITUATIONS



Daniel Sims

Portfolio Manager at Bavaria Industries Group

CURRENT RANKING: #19 All-Time

BADGES:

41 128

💡 Connect Group Plc

RETURN TO DATE:

▲ 10.74%

Asset: Equity

Symbol: CNCT:LN

Idea Posted: 12/13/19

Idea Updated: 12/16/19

EXPECTED RETURN:

66.2%

↑ LONG

ATTACHMENTS



TIMEFRAME

1-2 Years

SITUATION

Event /
Spec. Sit

MARKET CAP

74M GBp

GoodCo/BadCo currently undergoing strategic review with active shareholder base. Underlying FCF yield 35% with catalysts from BadCo divestment, dividend resumption and overall sale



About Daniel Sims

Daniel is a Portfolio Manager at BAVARIA Industries Group AG, a publicly listed entity which the founding family uses as a vehicle to invest their wealth.

Daniel has an open remit to invest across geographies and capital structures, looking for attractive risk/reward setups across public and private deals. His overarching philosophy is to remain opportunistic and to look for undervalued securities by fishing where the fish are. Therefore, he focusses his time on the hidden corners of the market where there is less competition and more chance of mispricings.

He has a Commerce Degree, 8 years experience at various hedge funds, and most importantly has been investing his own personal and family's capital for 10 years.



About Bavaria Industries Group

BAVARIA Industries Group AG is an industrial holding company specialising in the takeover and re-organisation of earnings-poor and/or unprofitable enterprises. In the process, we pursue three key objectives: cutting costs, developing new sources of turnover revenue, and preserving as many jobs as possible.

Connect Group (smiths News) Plc Ord

Asset Class: **Equity** Symbol: **CNCT:LN** Updated: **12/16/2019** Submitted: **12/13/2019**

Pricing & Return Details		↑ LONG
EXPECTED RETURN	66.20%	
TARGET PRICE	60.00 GBp	
INITIAL PRICE	32.60 GBp	



BY:
Daniel Sims

CURRENTLY AT:
Bavaria Industries Group

BADGES:



GoodCo/BadCo currently undergoing strategic review with active shareholder base. Underlying FCF yield 35% with catalysts from BadCo divestment, dividend resumption and overall sale



ASSET CLASS:
Equity



SITUATION:
Event / Special Situations



TARGET ALLOCATION:
10%+



CATALYSTS:
M&A/Buyout Target and 4 more



TIMEFRAME:
1-2 Years

INVESTMENT THESIS

THESIS SUMMARY

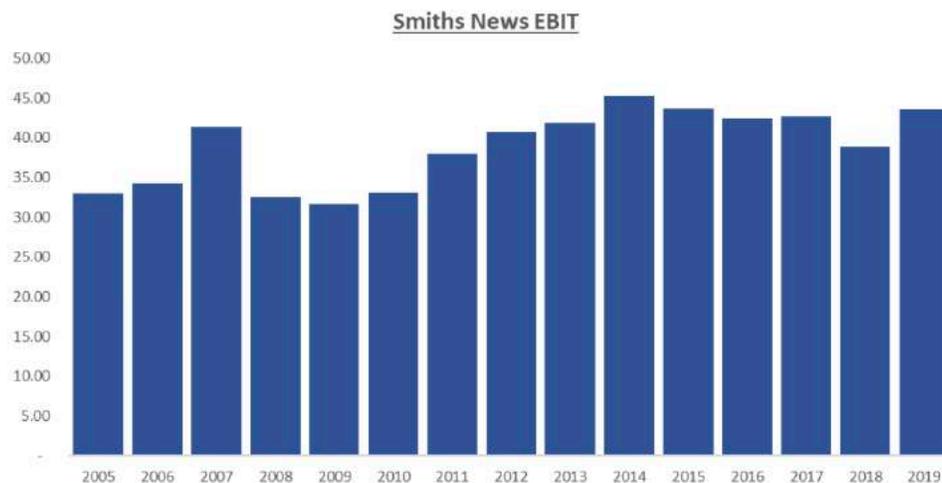
Connect Group is a classic GoodCo/BadCo. The GoodCo in this case is Smiths News, the UK's leading wholesale newspaper business. While the business is in long-term decline, it still generates a steady, capital light, £40m in annual pre-tax free cash flow. Smiths smaller, lower margin peer, was acquired by a Private Equity firm in 2018 for 5X EBIT, providing a good yardstick for which to value it.

The BadCo is Tuffnells. Tuffnells is one of the UK's largest "odd shape" parcel delivery companies which was acquired by Connect in late 2014 for -£100m. Today, it would be lucky to fetch £10m. While it used to be a decent company, Connect's former management team, in all their wisdom, tried to combine the asset light operations of Smiths with the CAPEX

heavy Tuffnell's and it was a complete disaster. The only saving grace is Tuffnell's Real Estate portfolio which the new management team is currently monetising. Through sale & leaseback transactions, it looks plausible the company could release ~£30m (£15m achieved so far). Importantly, the ParentCo only has to guarantee these leases for 1 year, after that, the lease liability sits within the Tuffnells subsidiary and is therefore, ringfenced.

Sum-of-the-parts ideas are typically a fertile hunting ground for "value traps." However, in this case, the share register is dominated by active investors. Most notably Aberforth Partners with 15% and Munich based family office, FORUM, with a 12% stake. I believe these factors skew the range of potential outcomes towards the positive side as they are unlikely to remain supportive of a strategy that destroys

Ticker:	LSE:CNCT
Price:	30p
Shares:	247m
Market cap:	£74m
Net debt:	£70m
EV:	£145m
Core EBIT:	£41m
EV/EBIT:	3.5X
Core FCF:	£28m
FCF yield:	35%



In my base case scenario, I assume Tuffnell's can be sold for £1 (not a typo), and Smiths News is worth 5X EBIT, which gets a valuation of -60p per share (100% upside) (assuming some of the funds from the recent sale & leaseback are put towards reducing the debt). In a bear case, where Tuffnell's remains within the group (unlikely given the shareholders involved) the overall EBIT would likely be around £28m as it loses -£1m per month. On a 5X multiple this gives a value of -30p. Therefore, the risk/reward setup looks to be asymmetric and extremely favourable, especially when one considers further upside from sale & leaseback transactions, monetisation of the overcapitalised pension fund and a potential sale of Smiths News too. In a bull case, it doesn't take herculean assumptions to get a valuation in excess of 80p or nearly 200% upside.

- Post the two sale & leaseback transactions, Tuffnell's should still have in excess of £15m in monetizable Real Estate. Therefore, someone may pay a positive equity value for it

REINSTATEMENT OF FORMER DIVIDEND POLICY

- Assuming Tuffnell's losses are gone and an 80% pay-out-ratio, at 30p the yield would be >30%

SALE OF SMITHS NEWS

- As a Public Holding Company, the management team estimates they incur £5m+ in corporate costs that could be cut
- At 5X multiple, this adds 10p per share in value

CATALYSTS

SALE OF TUFFNELLS

- In my base case I have assumed a sale price of £1
- The worst-case scenario would be for them to wind it down, but this seems unlikely given the depth of specialist restructuring buyout firms across UK/EU (for example, my firm would be a buyer at £1)
- The best-case scenario would be either a peer (AIM listed DX Group most likely) or an overconfident Private Equity shop

RISKS

CUSTOMER CONCENTRATION

- While pricing pressure from customers is not a major concern, due to the geographic-monopolistic structure of the industry, it is a concern from the perspective of them remaining customers
- The customer base is relatively concentrated, as one would expect. The largest customer was 10% of revenues in 2019, with the second largest being 6%

- Based on the overall structure of the newspaper industry, I would guess they have another 1-2 customers at ~5% before it begins tapering off
- Therefore, if one customer was to go bankrupt, it would be a material event
 - Looking at News Corp, which owns The Sun & The Times, it still remains quite profitable with EBITDA margins in the “News and Information Services” segment of 8%
 - Daily Mail & General Trust’s “consumer media” segment still generates a healthy 10% operating margin and despite sales continuously declining over the last 10 years, margins have remained very consistent
- So, while I reckon the publishers will continue to be pressured, imminent bankruptcies for the larger firms do not seem highly likely

- As part of their budgeting process, they have assumed £5m in cost out p.a. for the next two years, which is required to offset sales declines
- Going back to 2014, on average they have reduced OPEX by ~£6.5m p.a. and the man running Smiths News has been doing so for over a decade. So, it seems reasonable to have confidence in their ability to deliver on the required cost-out

ACCELERATION IN VOLUME DECLINES

- Volume declines have been pretty stable (as a %) since 2010, at around 6% p.a.
- My personal view would be that declines are more likely to slow than accelerate as they hit a “base level” of audience that still prefers physical paper. This is highly influenced by my personal preference for physical newspapers, plus that of certain friends and family members. Therefore, it is highly biased and should not sway one’s opinion
- Volume reductions have historically been offset by price increases, and I haven’t seen any evidence as to why this is not likely to continue in the future

FAILURE TO ADEQUATELY REMOVE COSTS

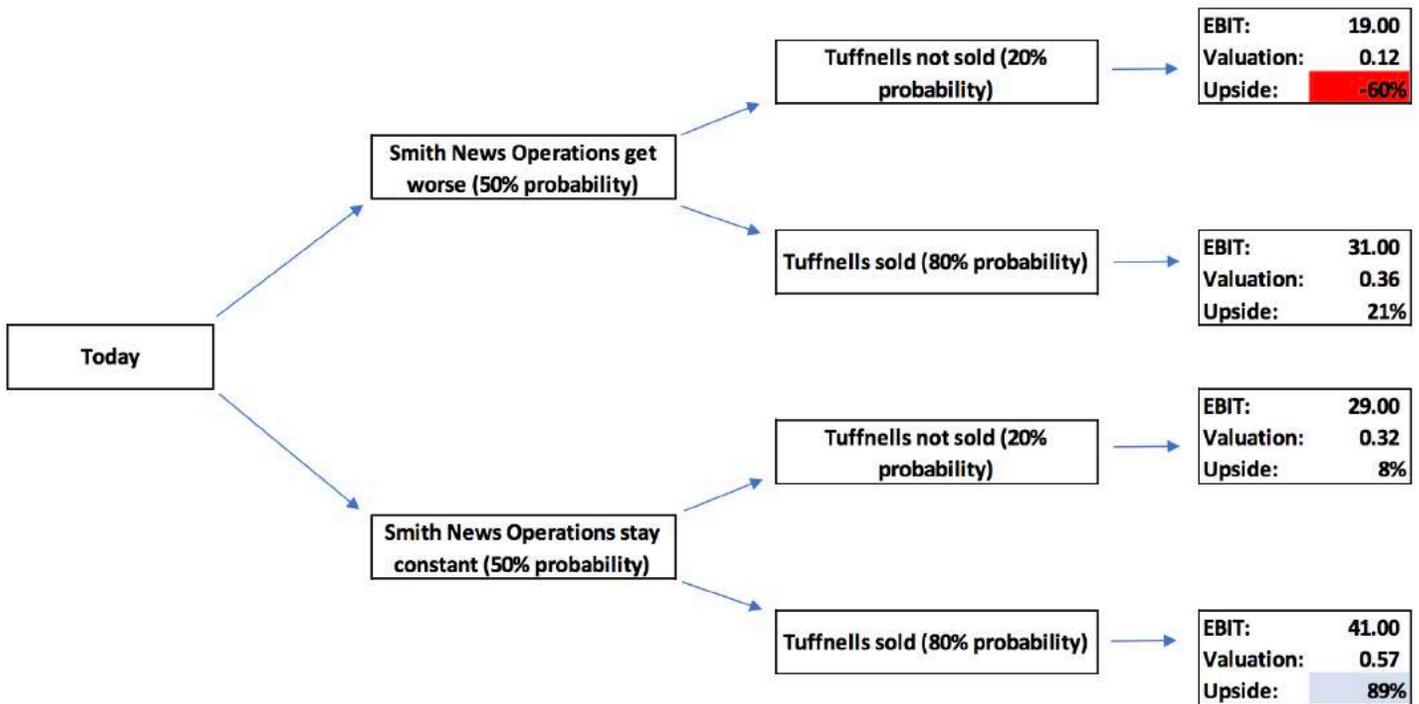
- This is the highest probability risk
- When they renegotiate their contracts and do internal budgeting, they base all profit assumptions upon cost realisations they expect each year
- Currently, to maintain profitability, they will need to reduce operating costs by £5m p.a. for the next two years

MONOPOLISTIC PRACTICES COMING UNDER ATTACK

- Smiths News holds 55% market share and the remaining 45% is held by Menzies Distribution (acquired by Endless LLP in mid-2018)
- There is extremely little cross-over between the businesses, meaning they essentially operate regional monopolies
- I have read some stories from local papers discussing how the companies leverage this power to deliver poor service quality to their customers, while consistently increasing prices
- Therefore, there is some risk that Governments decide to take action against them. Although, they are in a tough/declining industry, so would be difficult to see people being able to say they’re earning “too much money” etc.

RE-FINANCING

- In 2017 the Group entered into a banking facility which matures in January 2021
 - At that time, Tuffnells was still profitable, and the group was generating over £55m in operating profits (last year reported OP ~£30m)
 - Therefore, if Tuffnells is still within the group and losing money, they may have difficulty in re-financing the debt at favourable rates
- This could also be viewed through a positive lens, because the management team is acutely aware of the impact Tuffnells has on the group’s refinancing ability, and are therefore, more likely to sell it off



SCENARIO ANALYSIS

The key swing factors that will determine whether this investment is profitable or not are:

1. Operational performance of Smiths News
2. Whether Tuffnells is sold or not

Therefore, I construct the following Decision Tree to create the reasonable bounds of potential outcomes:

KEY ASSUMPTIONS:

- Smiths News current EBIT £41m
- Smiths News worse EBIT £31m (based on achieving none of the budgeted costs out for the next 2 years)

- Tuffnells EBIT (£12m)
- Net debt £65m (was £70m at year-end, but have since done 2 sale & lease back transactions totalling -£15m)
- EBIT multiple 5X

Even assuming a very conservative 50% chance that Smiths News operations get worse (it has had extremely consistent profits for 15+ years), the probability of losing money still seems unlikely with a conditional probability of only 10% (50% x 20%).

Putting the valuations and probabilities together, I get the following expected value:

Scenario	Value/share	Probability	Adjusted Value
Smiths News operations get worse & Tuffnells not sold	12p	10%	1.2p
Smiths News Operations get worse & Tuffnells sold	36p	40%	14.4p
Smiths News operations stay constant & Tuffnells not sold	32p	10%	3.2p
Smiths News operations stay constant & Tuffnells sold	57p	40%	22.8p
			42p

Therefore, given the range of potential outcomes, I calculate an expected value of 42p – providing for an expected return of 40% if one was able to run this bet multiple times.

The Board plan to make a decision regarding Tuffnell’s future within the next 6 months, and given the shareholder base, if they fail to come to a conclusion, I don’t think they will retain their jobs. Therefore, this investment should have a relatively short duration of 1-2 years, providing very attractive annualised expected returns.

At current prices, there is also a large cushion providing room for a deterioration in operations at Smiths News. The following matrix shows the return potential at various levels of EBIT and multiple, with the assumption that Tuffnell’s is sold for £1: [See figure below]

As the matrix shows, as long as the core business is worth at least 4X (in-line with the recent peer transaction) the outcome from this investment should prove very favourable. The only outcome which results in a loss is in the event the core Smiths News operating profits decline ~25% and the exit multiple is 4X.

SMITHS NEWS

Smiths News is the UK’s largest newspaper and magazine wholesaler, with roughly 55% market. Every morning they facilitate over 27,000 deliveries, before 9am. They pick, pack and consolidate supplies from over 3,000 printed titles, as well as process returns and recycling of unsold copies from 39 depots across the UK.

The company has two primary revenue streams:

1. They receive a % of the cover price for sold newspapers & magazines
 - a. This is why the decline in revenues has been less than the overall UK circulation decline – pricing increases
2. They receive payments from the re-sellers for making the delivery
 - a. Fixed price service/deliver fee

The business model is capital light, wherein they only operate the distribution centres and the drivers are independent contractors with their own vehicles. This has been of crucial importance given the structural decline in the industry as it allows them to more easily reduce capacity.

Smiths and Menzies operate geographical monopolies and barriers to entry are almost insurmountable. They stagger contract renewals (which average 5 years in duration) so that in any year, only a fraction of the total market is up for grabs. Therefore, a competitor would have to suffer substantial losses while they slowly acquire market share, only to end up in a declining industry! Competition is not a risk in this industry.

It would also be difficult to convince the publishers to switch, as they need to have a lot of faith in the distributors as a going concern due to the enormous debts they have with them due to the long payment terms. Therefore, a competitor, which would initially be losing money due to lack of route density, would have to convince the publishers that they will remain in business long enough to pay them back for the inventories. Doesn’t seem likely.

Core EBIT	Multiple			
	4X	5X	6X	7X
£44m	50%	109%	169%	228%
£42m	39%	96%	152%	209%
£40m	28%	82%	136%	190%
£38m	17%	69%	120%	171%
£36m	7%	55%	104%	152%
£34m	(4%)	42%	88%	133%

Assumed GM:	15%						
	2013	2014	2015	2016	2017	2018	2019
Gross Profit:	233.28	232.49	225.71	220.71	211.83	204.24	195.50
OPEX:	191.48	187.29	182.01	178.31	169.13	165.34	151.90
OPEX change:		- 4.20	- 5.28	- 3.70	- 9.18	- 3.79	- 13.45

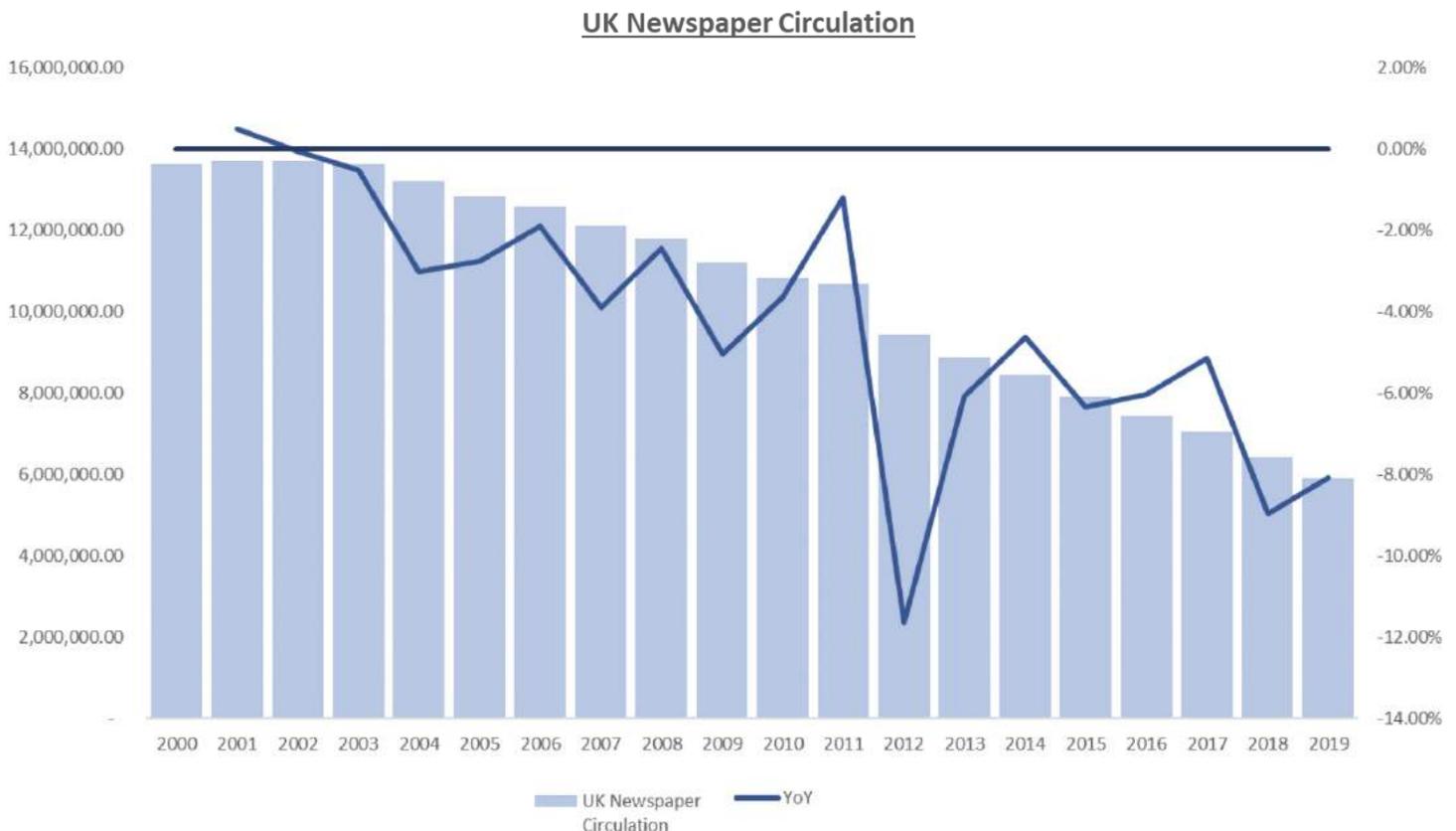
The current MD of Smiths News, Jon Bunting, has been with the Group since 1994 and has done a tremendous job in offsetting the declining revenues through cutting costs. It requires some assumptions to be made on gross profit margins, but since 2013 it looks like he has managed to reduce operating expenses by -£40m or £6.5m per annum. This gives more credibility to their currently budget £5m in annual OPEX reductions to maintain current profits [See figure above].

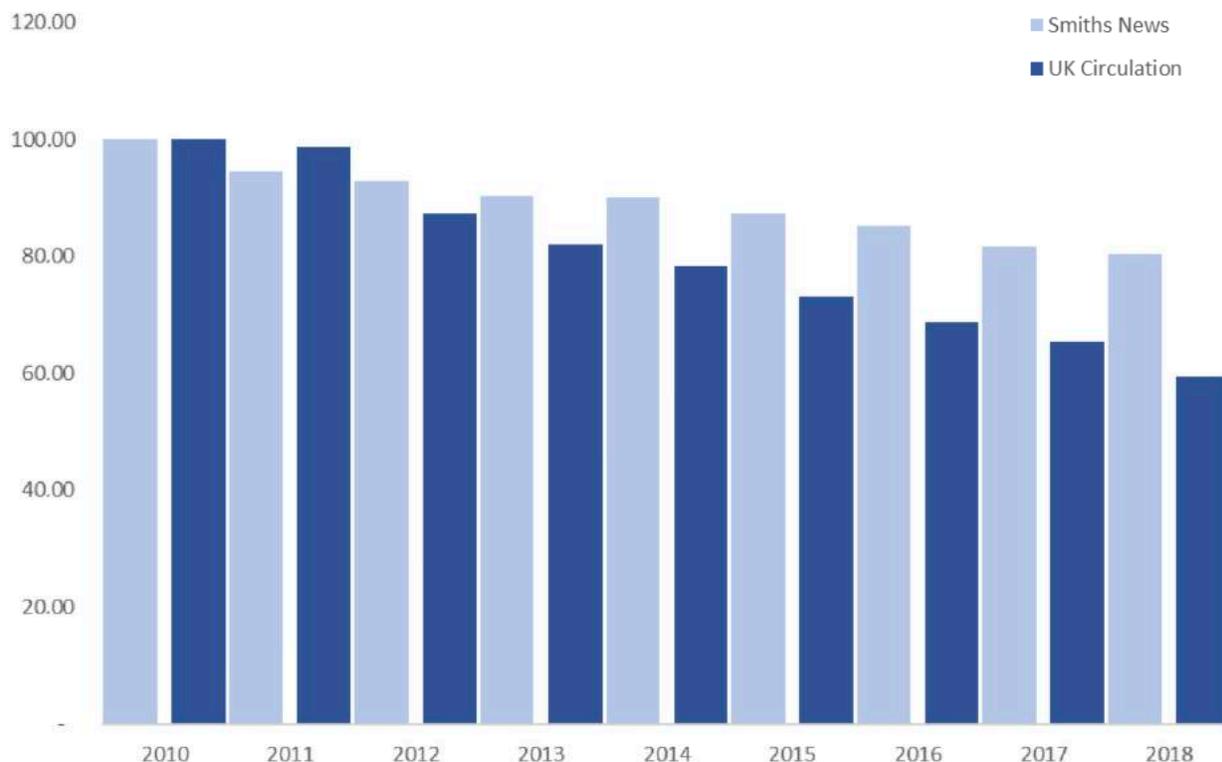
Jon was recently rewarded for his efforts through being promoted to interim Group CEO.

INDUSTRY

As expected, the overall industry (measured by circulation) is in a steady, long term decline. The following chart is based on circulation data for the 12 largest publishers over the last 19 years (including the now defunct “The Independent”).

The average rolling CAGR is around -6% but there are quite large differences between different papers. For instance, the Evening Standard and The Times are roughly flat on where they were 3 years ago.





The [above] chart compares Smiths News revenues, with overall circulation, rebased to 2010.

This chart essentially highlights the price increases, with circulation declining at 6% p.a. over the period, and revenues declining at 3% p.a.

WHY IS IT MISPRICED?

- Dividend cut forced “income funds” to sell
- It doesn’t look great from the reported numbers, with ongoing write-downs etc. causing it to report heavy losses in the last two financial years
- It’s quite a small, illiquid stock
- Numerous “unforced errors” from prior management team likely don’t give investors much faith
- It’s in a declining industry, which public markets do not often correctly value

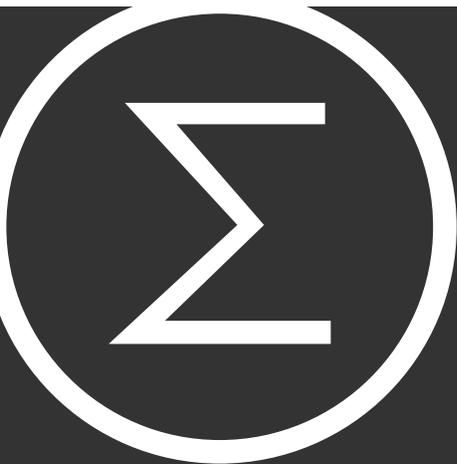
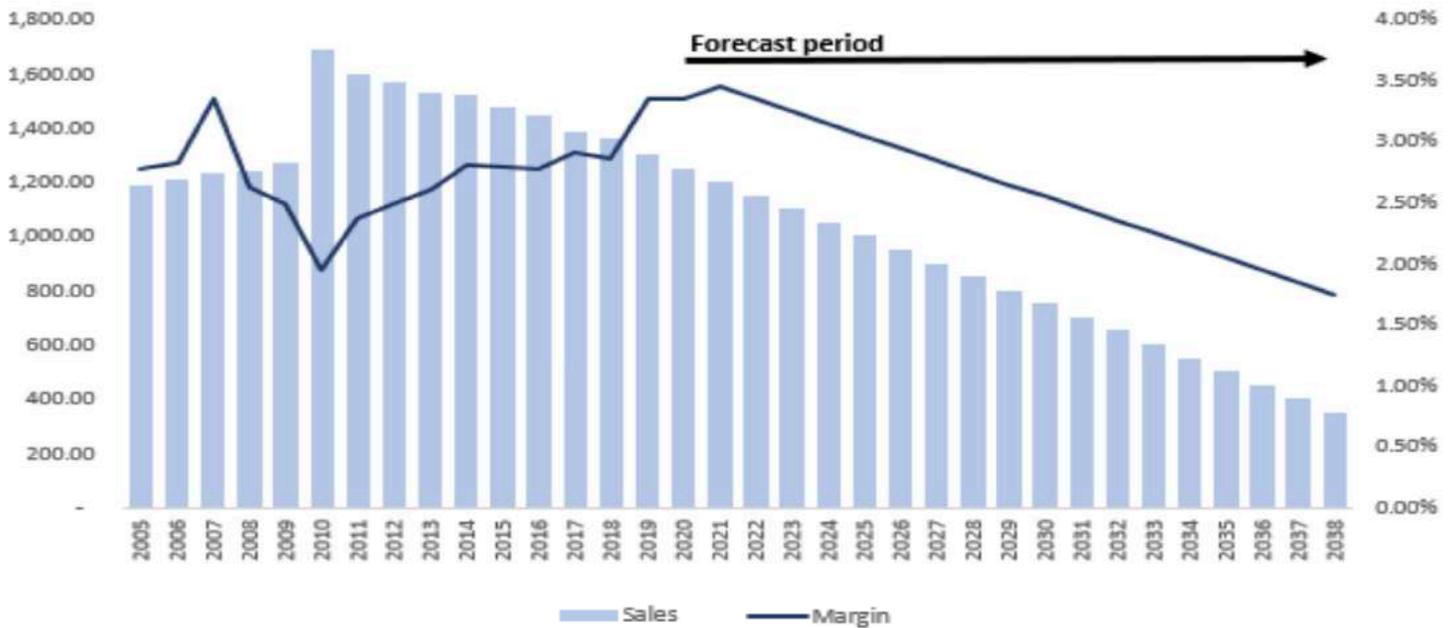
SUMMARY

Smiths News is not a compounder. It has a commanding position in a dying industry. However, for this investment to work, it does not require herculean assumptions. As long as Smiths News is worth more than 3X EBIT and it can maintain relatively steady profits, this investment should generate attractive returns. Given a near exact peer was acquired in 2018 for 5X EBIT, I think it’s safe to assume this is the going rate.

At current prices, if Tuffnells is removed, and the company returns to its former high pay-out-ratio policy, the stock would likely be providing a dividend yield in excess of 30%. The guy who’s been in this business for 25 years is confident they can at least maintain current profits for the next three years. Therefore, whatever happens after that is the cherry on top, because we would have recovered our entire investment by then!

IS IT REALLY WORTH 5X EBIT?

Before I found out that Menzies had been acquired in 2018 for 5X EBIT, I had already come to the conclusion it would likely be worth 4-6X based on the following DCF assumptions:



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FINALIST

SPECIAL SITUATIONS



Serge Belinski

Chief Investment Officer at Degrancey Capital

CURRENT RANKING: #8 Energy

BADGES:

Orca Exploration Group Inc

RETURN TO DATE:

5.26%

Asset: **Equity**

Symbol: **ORC/B:CN**

Idea Posted: **12/02/19**

Idea Updated: **12/09/19**

EXPECTED RETURN:

62.6%

LONG

ATTACHMENTS

N/A

TIMEFRAME

6 Mo. - 1 Year

SITUATION

Event /
Spec. Sit

MARKET CAP

219.9M CAD

Holding company trading below its cash and receivables and at a huge discount to a buyout offer that undervalues the company. The board is currently exploring strategic alternatives.



About Serge Belinski

Serge is a passionate student of business, investing and the human brain. After a scientific education in France in mathematics and physics, Serge graduated in Computer Science in the US and started to work as an IT & Telecom engineer in 2007. After a couple of years of work experience, he fully transitioned to investing and entrepreneurship and founded a consulting company that re-invested its excess cash in the stock market. Shortly after that, he founded L'Investisseur Français, a premium subscription service targeting French-speaking investors. Serge then co-founded a sports service provider (MVES), a niche e-learning company (LNF Group) and a registered financial advisor (Degrancey Capital). His past investment mistakes led me to favor investments in companies with attractive returns on their invested capital trading at a fraction to their conservatively appraised net asset values. The approach results in a very concentrated stock portfolio as few companies match these criteria today.



About Degrancey Capital

Degrancey Capital was born from the association of 3 entrepreneurs, specialists in economic models and Value Investing. Its activity is to deliver equity investment advice to: Companies wishing to make profit from their excess cash and individuals who wish to invest in the equity markets. We identify and buy securities of listed companies whose market valuation is significantly lower than the intrinsic value as we calculate it. We follow the evolution of this value according to the information published by the company. We sell the securities when the market valuation approaches the value of the company as we calculate it. Our services are invoiced exclusively as a percentage of the performance achieved thanks to our advice. Aligning the interests of our clients and those of Degrancey Capital allows us to focus our efforts solely on the performance of the recommended investments.



FINALIST

SPECIAL SITUATIONS



Evgeny Vostretsov

Analyst at Falcon Edge Capital

CURRENT RANKING: #6 LTM

BADGES:
2 2

Univar Solutions Inc

RETURN TO DATE:

-1.96%

Asset: **Equity**

Symbol: **UNVR:US**

Idea Posted: **12/09/19**

Idea Updated: **12/20/19**

EXPECTED RETURN:

80.15%

LONG

ATTACHMENTS



TIMEFRAME

2-5 Years

SITUATION

**Event /
Spec. Sit**

MARKET CAP

4.0B USD

Univar has strong moats and capable and incentivized management. It can achieve synergies of Nexeo acquisition and then compound earnings at 10%+, 14%+ after-synergy FCF Yield. 78% upside.



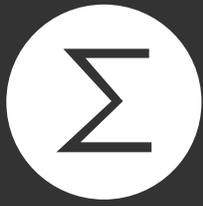
About Evgeny Vostretsov

I'm an Investment Analyst at Falcon Edge Capital, a long/short equity hedge fund based out of NYC. I work on global investment opportunities. Prior to joining Falcon Edge, I worked as an Analyst at Caro-Kann Capital, where I focused on equity event-driven investment opportunities globally. I graduated with an MBA degree and concentrations in Analytic Finance and Economics from The University of Chicago Booth School of Business. I'm also a CFA and CAIA charterholder.



About Falcon Edge Capital

Falcon Edge Capital is a diversified global alternative asset manager founded in 2012 with offices in New York and London. Falcon Edge offers a variety of investment products that cover a number of asset classes, themes and geographies. These include public equity, venture capital, distressed, private equity and activist strategies as well as a financial center joint venture with a leading sovereign entity.



MICRO CAPS

Ideas on companies whose respective market capitalizations were less than ~US\$300M at the time of submission.





WINNER MICRO CAPS



Alex Ryzhikov

Partner at Ewing Morris North American Small-Cap

BADGES:

Phx Energy Services Corp

RETURN TO DATE:

▲ 1.41%

Asset: Equity

Symbol: PHX:CN

Idea Posted: 12/16/19

Idea Updated: 12/20/19

EXPECTED RETURN:

74.22%

↑ LONG

ATTACHMENTS



TIMEFRAME

1-2 Years

SITUATION

Deep Value

MARKET CAP

153.4M CAD

As this report illustrates, we believe that PHX Energy Services currently presents one of the most attractive opportunities we have encountered in the micro-cap universe.



About Alex Ryzhikov

Alex joined Ewing Morris & Co. Investment Partners in May 2014. Alex is responsible for portfolio management and investment research, and also contributes to investor relationships and general operations. Prior to his current role, Alex worked as an Investment Analyst at Burgundy Asset Management where he was part of the U.S. Equity team. Alex graduated with distinction from Concordia University in 2011 with a Bachelor of Commerce degree in Accounting and a Minor in Finance. He also holds a Bachelor of Science degree in Microbiology and Immunology from McGill University. At Concordia, Alex was part of Kenneth Woods Portfolio Management and John Molson Case Competition programs. As part of John Molson Case Competition Program, he won multiple awards in national and international business case competitions.



About Ewing Morris North American Small-Cap

The Ewing Morris North American Small Cap Strategy was launched in May of 2015 with the aim of providing a differentiated solution to institutional clients looking for long-only equity exposure. We believe that the best relative performance can be achieved by following an Enterprising approach to investing, as opposed to an undue reliance on descriptive statistics. This means that we let our clients choose the benchmark that they feel represents an appropriate opportunity cost for a Small Cap mandate, while we spend our time looking for opportunities to compound ours and our clients' capital at attractive rates (low-teens).



Ewing Morris North American Small-Cap is actively seeking capital on SumZero's Capital Introduction platform. To be connected, please reach out to capintro@sumzero.com.

Phx Energy Services Corp Com

Asset Class: **Equity** Symbol: **PHX:CN** Updated: **12/19/2019** Submitted: **12/16/2019**

Pricing & Return Details		↑ LONG
EXPECTED RETURN	74.22%	
TARGET PRICE	5.00 CAD	
INITIAL PRICE	2.83 CAD	



BY:
Alex Ryzhikov

CURRENTLY AT:
Ewing Morris North American Small-Cap

As this report illustrates, we believe that PHX Energy Services currently presents one of the most attractive opportunities we have encountered in the micro-cap universe.



ASSET CLASS:
Equity



SITUATION:
Deep Value



TARGET ALLOCATION:
2% - 5%



CATALYSTS:
M&A/Buyout
Target and 1 more



TIMEFRAME:
1-2 Years

INVESTMENT THESIS

Note: All figures in the report are in Canadian dollars, unless otherwise stipulated.

DRILLING DOWN INTO PHX ENERGY SERVICES REVEALS A SPECTACULARLY MISPRICED MICRO-CAP

Name: PHX Energy Services.

Ticker: TSX: PHX

Share Price: \$2.70/share

Market Capitalization: \$150MM

Enterprise value: \$165MM¹

¹This figure considers only net debt and not capitalized leases.

INTRODUCTION

Before diving into the report, I want to be upfront with the following two disclosures:

First, this investment is likely to be actionable for nimble funds with AUM of \$1 billion or less as the stock has a market capitalization of ~\$150 million, at the time of writing.

Second, it is a Canadian listed energy services business. The reason I felt compelled to make this last disclosure is that it appears that most investors today steer clear of energy services stocks, especially those listed in Canada. This apprehension is quite understandable when looking at the performance of Canadian energy stocks since 2014:



Source: Capital IQ as of November 2019.

Investors who have avoided this bloodbath by staying out of energy related securities altogether feel rightly vindicated, while many of those who were unfortunate enough to have meaningful exposure to energy have either been fired, or manage substantially less capital and have already doubled and tripled down by now.

To be clear, at Ewing Morris, we are generalists. We don't have to be invested in energy securities, and generally, our view is that over a full cycle most energy producers and energy service companies, don't create much economic value. It is also true that the environment in Canada is especially difficult for producers and service companies as compared to their peers south of the border. This is in large part due to the Federal Government's reluctant stance as it pertains to takeaway capacity for Canadian producers.

As outlined below, our investment thesis for PHX Energy Services is *not* predicated on any improvement in Canada.

So why should you keep reading? Whenever we find ourselves in an environment where everyone we meet shares the same bleak view of a sector, we get excited. This is not because we think that the consensus view is necessarily wrong. In fact, more often than not it is correct. We get excited because there are likely to be some unique businesses that get painted with the same broad brush and may present unique investment opportunities. This is, in part, why our initial Long-Only efforts are focused specifically on the Canadian Small-Cap market.

We believe PHX Energy Services is such an overlooked opportunity and one of the most mispriced businesses we have encountered in the North American micro-cap universe.

THESIS SUMMARY

FUNDAMENTALS

1. Unlike almost all Canadian energy services companies that have struggled to keep their earning power stable over the past couple of years, **we forecast that PHX Energy Services is likely to more than double its earning power from 2017 to 2019², all organically.** Additionally, in the current oil environment (WTI at ~\$60³), we forecast PHX Energy Services to grow its earning power by another ~20% in 2020. In part, this unusual performance for a Canadian energy services business reflects the fact that although its stock is listed in Canada (and trades like other Canadian energy services names), PHX Energy Services generates most of its revenue and earning power (over 90%, in fact) in the U.S., disproportionately in the Permian basin.

The table below illustrates historic EBITDA and 2019 EBITDA sell-side estimates, indexed to 2017 for several companies including PHX Energy Services that we believe account for a representative sample of Canadian Energy service companies⁴. We will highlight that Cathedral Energy Services is a direct competitor to PHX Energy Services and is the only other publicly traded directional drilling company in Canada.

	2017	2018	2019e
Calfrac Well Services	100%	169%	107%
Precision Drilling	100%	121%	124%
Trican Well Services	100%	49%	14%
Total Energy Services	100%	143%	140%
Source Energy Services	100%	128%	57%
Cathedral Energy Services	100%	63%	26%
PHX Energy Services	100%	210%	233%

Sources: Capital IQ, GMP First Energy, Ewing Morris.

² Source: Company filings, Ewing Morris Estimates.

³ <https://www.bloomberg.com/markets/commodities>

⁴ Trican and Total's results are impacted by divestitures and acquisitions

We believe that the above table highlights that although passive investors may classify PHX Energy Services as “just another Canadian energy service company”, its fundamental performance looks nothing like the rest of the field.

2. PHX Energy services has one of the cleanest balance sheets in the space.

Another common characteristic among Canadian energy service companies in the current environment is elevated levels of debt for cyclical businesses. As illustrated by Net Debt⁵ to 2019E EBITDA ratios below: Differentiated technology driving market share gains.

	Net Debt /2019E EBITDA
Calfrac Well Services	3.2x
Precision Drilling	3.7x
Trican Well Services	2.1x
Total Energy Services	2.6x
Source Energy Services	5.7x
Cathedral Energy Services	3.3x
PHX Energy Services	0.9x

Source: Capital IQ, Peters & Co, Ewing Morris, as of December 2019.

PHX Energy Services has a pristine balance sheet with less than half a turn of net bank debt (and expected net cash position by the end of 2020, possibly end of Q1 2020). This favorable financial position provides the company with ample flexibility to continue investing in technology (and continue gaining market share) and opportunistically return capital to shareholders in the form share repurchases (more on this later) or special dividends. More importantly, unlike its peers, the Company’s financial position does not imperil its survival should we experience another downturn in energy prices.

The preceding two points illustrate that although PHX Energy Services is listed in Canada and provides energy services, its fundamental performance has little in common with most of its Canadian brethren.



Source: Company’s filings, Ewing Morris

3. Differentiated technology driving market share gains.

The best-in-class performance demonstrated by the Company over the past three years which we expect to continue, is in our view, the direct result of management’s decision to invest in differentiated technology through the 2014 and 2015 oil industry downturn, and to focus on the Permian basin in the U.S. As explained at length in this report, these investments have allowed PHX Energy Service to develop a differentiated value proposition that has allowed the Company to grow market share, while at the same time charging a premium. A remarkable feat in the current energy environment.

VALUATION

Let’s recap the fundamentals thus far: 50% CAGR in earning power over the last two years, effectively no financial leverage, differentiated technology with recent history of significant market share gains. If I did not mention at the outset that this was a micro-cap Canadian listed energy services company, a reader could justifiably anticipate a mid-teens EBITDA multiple valuation. Thankfully, PHX Energy Services is listed in Canada where micro-cap energy service companies have been left for dead.

⁵ To make figures comparable debt figures include lease obligations and EBITDA estimates exclude lease payments.

4. PHX Energy Services is not only being attractively valued on absolute terms 3.3x EV/2019 EBITDA Multiple with ~25% FCF Yield⁶, but it also trades at a discount to its struggling peers...(Note: the difference between 3.3x and 3.4 in the table is due to the fact the former estimate is ours and the latter is taken from sell-side for the sake of consistency).

	EV/2019 EBITDA
Calfrac Well Services	6.9
Precision Drilling	4.8
Trican Well Services	10.7
Total Energy Services	4.5
Source Energy Services	6
Cathedral Energy Services	5.2
PHX Energy Services	3.9

Source: Capital IQ, Peters & Co., GMP First Energy, Ewing Morris.

CATALYST

5. Capital allocation likely to add meaningful upside over the next 12 months. Skeptics might ask: “sure it is a

mispriced asset, but if no one ever cares about energy services companies again, especially those listed in Canada, what is the catalyst for this asset to ever be revalued?” Our answer is the following: Our base case assumption is that we will not see incremental interest in this space and thus the value will have to be unlocked through thoughtful capital allocation by the company itself. We believe that management is aligned with shareholders in this regard, as evidence we present company’s buy back activity over the past 12 months.

Over this time period the company has spent in excess of \$14M to repurchase shares, with latest reported purchase on November 29, 2019. The company has on average paid \$3.0/share for its stock, above where the shares trade today. [See figure below]

In fact, we believe the company may accelerate the pace of buybacks and think that a Substantial Issuer Bid is a distinct possibility in 2020. If current valuation does not change, it will take the company 4 years to go private with its own cash flow and no incremental debt. More likely, in our view, is that the company will significantly shrink the number of shares outstanding before looking to monetize the asset.



Source: INK Research: <https://www.inkresearch.com/inkpage.php?pageid=3&ticker=PHX>

⁶ These figures are based on our estimates, described in more detail in the report.

BRIEF INTRODUCTION TO DIRECTIONAL DRILLING AND HYDRAULIC FRACTURING

Note: For those familiar with the directional drilling industry, you can safely skip the following section to [Enabling Technologies].

This section is not intended to provide a comprehensive overview of Directional Drilling and Hydraulic Fracturing. The aim is to simply introduce the reader to these two concepts and, importantly, highlight why we believe that horizontal/directional drilling (and demand for PHX services) is not likely to disappear while we continue to extract hydrocarbons in North America. For those interested in a more in-depth exploration of these topics, and the emergence of shale gas and oil exploration, we recommend the following two books:

1. [The Boom: How Fracking Ignited the American Energy Revolution and Changed the World by Russell Gold](#)
2. [The Frackers: The Outrageous Inside Story of the New Billionaire Wildcatters by Gregory Zuckerman](#)

DIRECTIONAL DRILLING

FOSSIL FUEL EXTRACTION

Although the term “fossil fuel” is a misnomer⁷, it does hint at the fact that the oil and natural gas that we consume today comes from remains of lifeforms (zooplankton and algae) that existed millions of years ago. Simply speaking, when these organisms died, their remains settled at the bottom of a sea and were covered with sediment. As sediment accumulated, increasing pressure and temperature caused the remains to transform into the hydrocarbon products that we know and consume today (or their precursors). Some of this sediment remains “trapped” in sedimentary rock (referred to as oil shale) in the form of

⁷ <https://www.forbes.com/sites/quora/2017/06/28/though-ancient-fossil-fuels-dont-actually-come-fromfossils/#c12558b60815>

⁸ There are two distinct steps needed to put a well in production (start collecting oil at the surface): 1 – Drilling: gaining access to the reservoir (focus of this report) and 2 – Completion: includes everything from simply cementing the well to fracking the well (PHX is not involved in completion).

kerogen (think of this as oil precursor) while some of the sediment got transformed into oil. If permeability of the rock allows, the transformed sediment tries to seep to the surface. Some of this oil reaches a non-permeable formation (referred to as caprock) that it cannot pass through. Here it accumulates to form what we refer to as an “oil field” and referred to as a conventional reservoir.

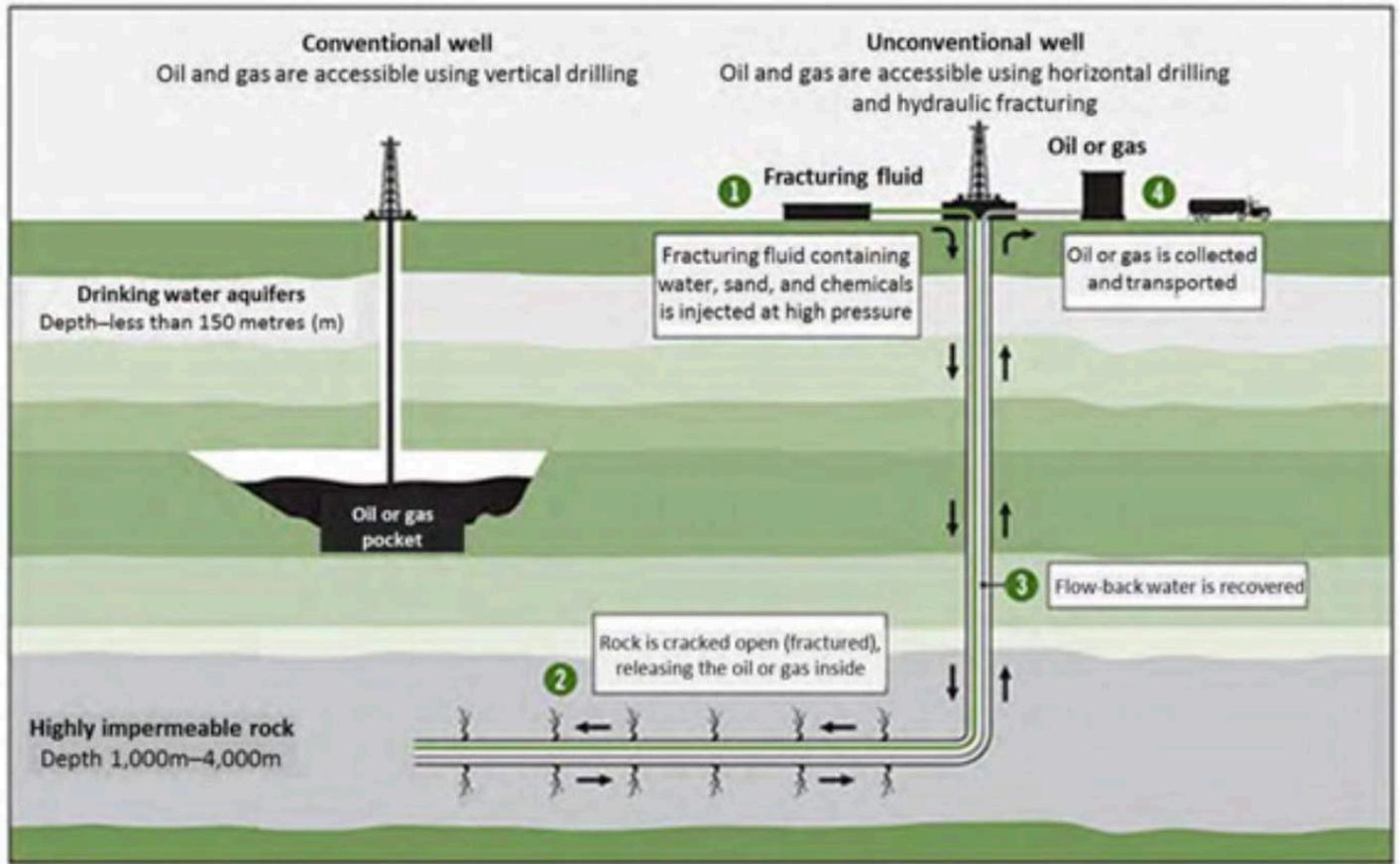
From the time the first commercial North American well was drilled in Oil Springs Ontario in 1858 and up until the mid-2000s, most wells drilled in North America were vertical wells, illustrated [on the following page]. Most of the oil production during this time came from conventional oil reservoirs where one basically needed to drill a hole into a reservoir that contained liquid hydrocarbons and then collect them at the surface (see “Conventional Well” illustrated on the graph [on the following page]).

The [illustration on the following page] also shows a horizontal well on the right (a type of directional well) that includes a vertical section, a kick off point (the point at which the angle changes) and then the horizontal section (section that is flat to the horizon).

At first, directional drilling was a tool used to access conventional reservoirs in areas where vertical wells were impracticable. For example, the first directional wells were drilled in 1930 in Huntington Beach, California. These wells were drilled to access oil and gas deposits under the ocean (offshore) from an onshore well. Most of the directional drilling from 1930 until the 1990s was done just like in the preceding example, to access conventional hydrocarbon deposits that were simply inaccessible with vertical wells. However, vertical drilling remained the standard approach.

There are two related reasons why the oil and gas industry first focused on conventional deposits/vertical wells:

1. **ECONOMIC:** Conventional wells cost less to drill and complete⁸ than horizontal wells. Thus, for the same price of crude oil produced, conventional wells



http://www.ncceh.ca/sites/default/files/Overview_shale_gas_hydraulic_fracturing_Canada_Nov_2014.pdf

have substantially better returns. While conventional reserves were plentiful, the marginal cost of oil was determined by the next conventional well available to be drilled. The industry had little incentive to invest in unconventional technologies.

The economic question deserves its own aside. When exploration and development companies report their reserve estimates, they consider current technologies as well as the price of oil. As the price of the commodity increases, the amount of capital (and indirectly innovation) that can be thrown at a problem goes up.

2. TECHNOLOGICAL: Until recently, the drilling and completion technologies were simply not good enough to extract oil and gas economically from unconventional reserves.

The combination of depletion of conventional reserves in North America, higher oil prices and improved completion

technologies (specifically hydraulic fracturing) led to a shift towards directional drilling.

HYDRAULIC FRACTURING

The “Fracturing” component deals with the notion of breaking apart a rock formation to allow the hydrocarbons to make its way to the well where it can be collected and moved to the surface. The “Hydraulic” component refers to the fact that, today, fracturing is largely accomplished through the use of water, with a mixture of chemicals to reduce friction, under high pressure.

Hydraulic fracturing involves pumping a liquid in combination with a proppant (used to keep the rocks open) under high pressure into a rock formation containing oil and/or gas in order to fracture the rock and recover the hydrocarbons. The following video does a good job at outlining the process involved: [Animation of Hydraulic Fracturing \(fracking\)](#).

Initially, fracturing was used as means of “stimulating” (getting more oil out) existing conventional wells. These attempts can be traced to the 1860s when gun powder, and later, liquid nitroglycerin (a key ingredient in dynamite), were used to stimulate shallow, hard rock wells in Pennsylvania. If you think this is crazy, in the 1960s nuclear bombs were explored (with some detonations) as a means of stimulating hydrocarbon production in the United States.

However, no real progress was made until the late 1940s when a more rigorous study of the hydraulic fracturing process was undertaken by Floyd Farris of Stanolind Oil and Gas Corporation. Farris applied a more data driven approach to improve the fracking process.

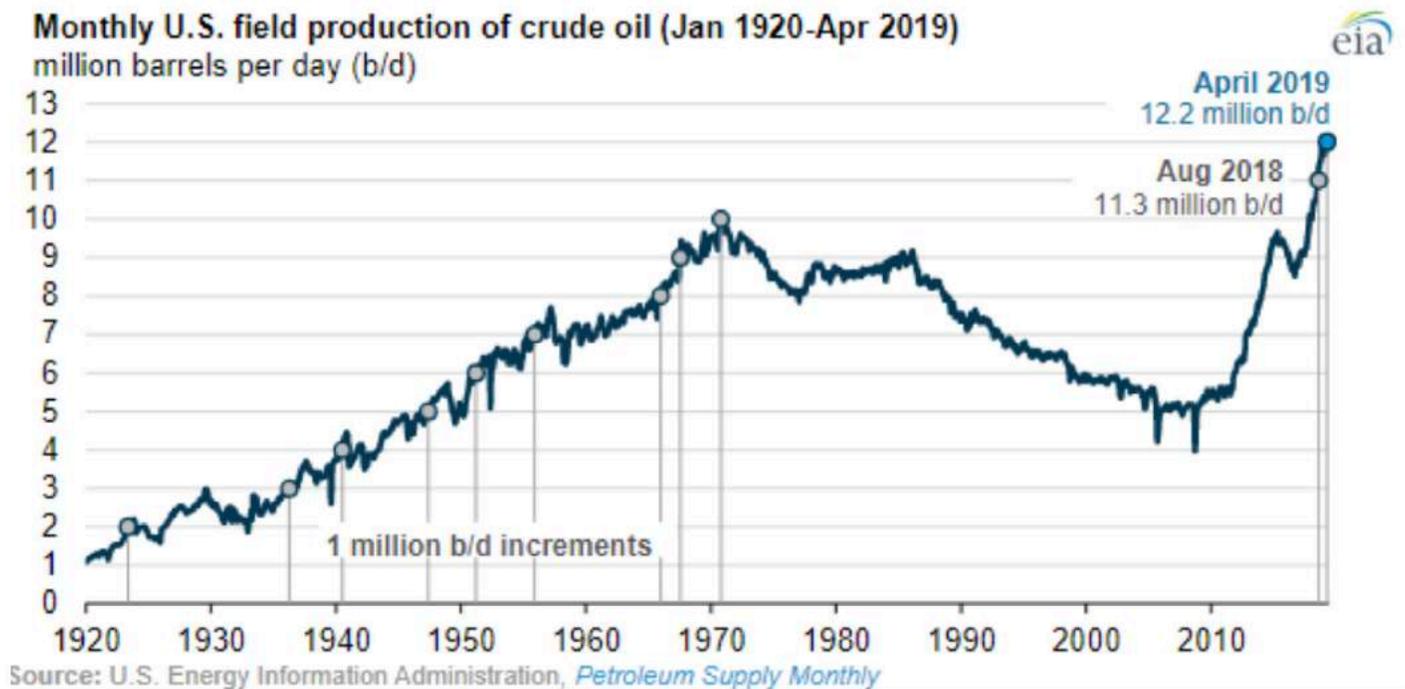
The next leap forward was made in the late 1990s by Nick Steinsberger while working for Mitchell Energy. Steinberger’s major innovation was to use water under high pressure (as opposed to gels and other more expensive compounds) as the main liquid to fracture the rock. This translated not only into a meaningful decline in well completion costs, but also improved well production.

This allowed for economic development of “unconventional” reservoirs and, correspondingly, for booming U.S. oil production (illustrated below).

This development of unconventional deposits that contributed to the growth in U.S. production in the late 2000s is closely tied to directional/horizontal drilling. Horizontal drilling effectively offers the optimal method of accessing these deposits. An important reason why this is the case is the fact that in the United States these deposits lie parallel to the ground making horizontal wells the most effective means of fracking the rock as multiple horizontal wells can be drilled from a single vertical section.

HOW THE DIRECTIONAL DRILLING SERVICES ARE PURCHASED

“Two things that I would never buy just on price are directional drilling services and drilling fluids” - A senior Apache Corporation drilling engineer.⁹



⁹From our conversations with a PHX Energy Services customer

An Exploration and Production company looking to drill a horizontal well will usually have to go through the following stages:

1. Have its drilling engineers/geologists design the well. The well design - provides the blueprint that the driller is expected to follow.
2. Hire a rig. The rig should be thought of as a big pump that supplies the energy needed to drill a hole in the ground. It is important to note that in most cases, the rig contractor and directional drilling contractor are hired separately, and directional drillers are not involved in the “[heavy lifting](#)” part of the operation that you see on TV.



Source: This picture was taken by Ewing Morris during due diligence at one of the sites where PHX Energy Services was doing work. As a reminder, the rig is not provided by the directional drilling company, but by a rig contractor like Helmerich & Payne.

3. Hire a directional rig contactor (PHX Energy Services or one its competitors), this is the part we are interested in and will discuss in more depth.

Our conversations with operators and service providers suggest that there are three main factors that influence the

decision when hiring a directional drilling service provider: personal relationships (between the E&P's (Exploration and Production company, like EOG Resources or Devon Energy) drilling engineer and the directional driller), level of service; and finally, price.

Historically, personal relationships would have played a disproportionate role in the hiring process. The higher weighting to personal relationships was, in part, a function of undifferentiated level of service and technology (most land-based directional drillers had very similar equipment) and as a result, a relatively uniform price. So, if an operator (E&P company) had a good relationship with a directional driller, because the latter had done a good job for him/her in the past, or because the salesperson had taken the drilling engineer hunting recently, that directional driller was likely to be awarded the job.

Over the last couple of years, the introduction of new differentiated technologies has resulted in some providers (specifically PHX Energy Services) being able to provide an objectively different level of service relative to the competition.

Furthermore, newly graduated drilling engineers are, with the help of computers, better equipped to evaluate the performance of directional drilling providers and demonstrate the difference in service quality through statistical analysis. As a result, the level of service (this includes the differentiated tools that an operator can bring to a job) has become much more important. We think this trend will help PHX continue to gain market share as the industry consolidates around a several high-quality operators.

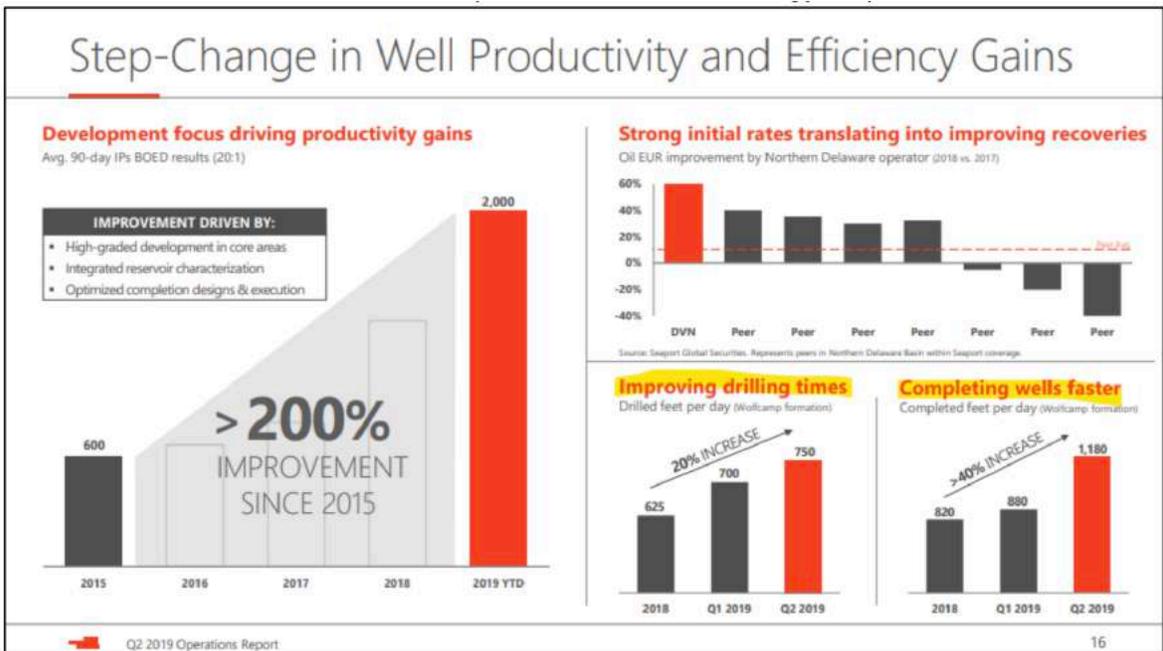
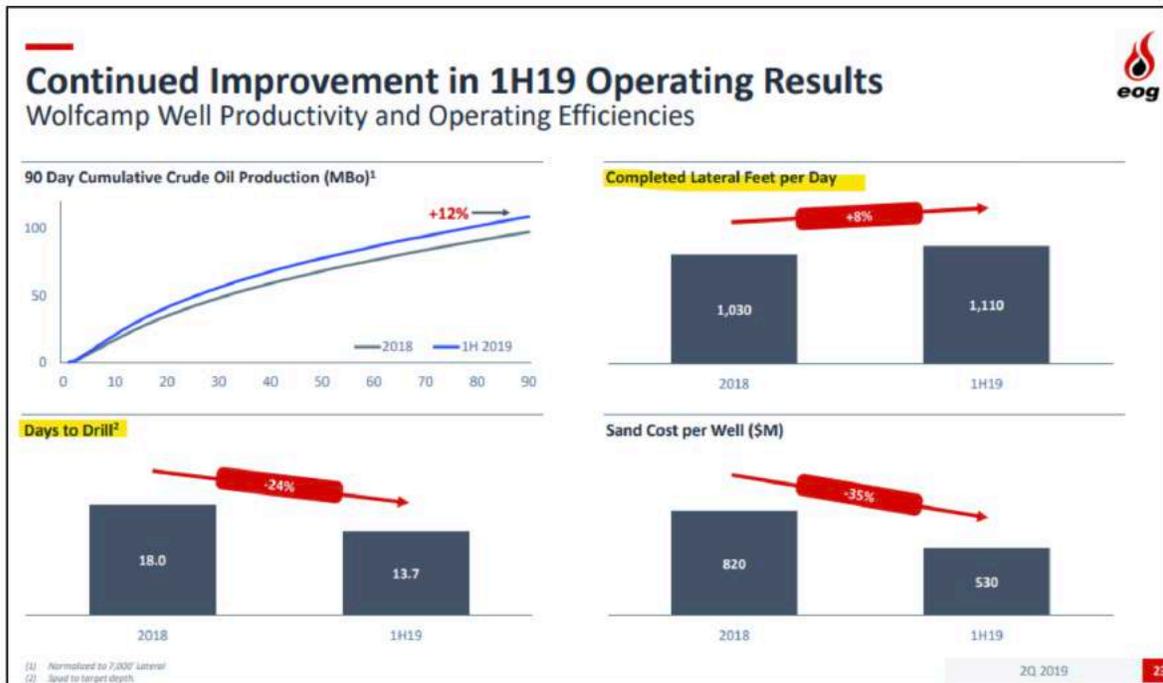
Price is obviously a consideration, but it is unlikely to ever become the determining factor in hiring a directional drilling service company. The reason for this is simple, the total day rate charged by a directional drilling company usually represents less than 20% of the total cost of drilling a well (with a rig operator accounting for the bulk of the costs). Thus, if it takes 30 days to drill a well, a 20% in savings on directional drilling contract (20% savings on 20% of the total cost = 4% total savings) can be wiped out by a mere 36-hour delay (a 5% decline in efficiency).

The critical nature of directional drilling services and the relatively low percentage of total cost that they represent explain the quote at the beginning of this section: “Two things that I would never buy just on price are directional drilling services and drilling fluids”.

To illustrate the importance of drilling efficiency to operators, we included slides below taken directly from investor presentations of two well know Exploration and Production companies.

First, EOG Resources is one of the most efficient operators in the Permian basin. We also believe that they are one of the heaviest users of PHX Energy Services equipment. [first image below]

The next slide that tells a similar story comes from Devon Energy Corporation: [second image below]



Source: Devon Energy Corporation Q2 2019 Investor Presentation

Again, the key point is that the technologies provided by PHX Energy Services (and a couple of other providers) are a subset of enablers that have allowed for improved efficiencies and lower costs you see from operators in the space. Furthermore, by being public about the improvements and cost savings that they are seeing in their operations, best in class operators like EOG are driving industry-wide adoption of new technologies like PHX Energy Services' Velocity MWD tool and Atlas motors that we now are going to discuss.

ENABLING TECHNOLOGIES

Directional drilling first became possible with the invention of surveying instruments that allowed the driller to measure the inclination and direction of the drill bit (these were precursors to current Measuring While Drilling (MWD) tools discussed later in the report) and the invention of Positive Displacement Motors (PDMs) (a precursor to mud motors also discussed later) all around 1930.

MEASUREMENT WHILE DRILLING (MWD) TOOL:

The challenge with drilling more than 300 meters underground is that there is no way for the driller to visually assess the location of the drill bit. MWD systems serve as the eyes and ears of the driller, allowing him to drill the well in line with the specification provided by the customer (the operator provides the blueprint for the path that they want the well to follow as we mentioned previously). Information is collected by the instruments underground is then sent to the surface where it is interpreted. This information includes inclination, direction (azimuth), temperature, gamma (radiation metric that allows geologists to identify the formation where the drilling is taking place) pressure, etc.

Capturing all this information is one thing, but transmitting this information to the surface is particularly challenging. There is no conducting wire that connects the MWD tool to the surface (it operates on an internal battery, or in some cases its own turbine) and therefore engineers had to develop other creative ways of transmitting this information. For a long time, the most common method of transmitting this information was through mud pulse telemetry.

Mud pulse telemetry uses fluctuations in drilling fluid (mud) pressure that is created by the MWD tool, which is sent to, and measured, at the surface. Essentially the MWD tool has a device that restricts the flow of mud through an MWD tool. One can encode the open (unobstructed) position as 1 and closed valve position (and corresponding pressure) as 0, and by changing the closed/open position it is possible to send a binary code back to the surface where it can be decoded. There are a couple of drawbacks to MWD tools that relies only on mud pulse telemetry:

1. It is slow: the amount of information that you can send is about 1 bit per second. For context, the average internet connection speed in the U.S. is approximately 100 million bits per second. The slow speed is the result of needing to mechanically close and open the device that restricts the flow of mud through the MWD tool.
2. It is more likely to break (meaning it is more expensive to operate). If these mechanical components jam or break, the rig operators must retrieve and replace the tools, costing the E&P company extra time and money.
3. The longer the lateral sections drilled, the harder it becomes to create noticeable differences in pressure at the surface, making the tool less reliable.

An alternative method of collecting information is through electromagnetic telemetry (EM). Electromagnetic telemetry involves generating electromagnetic waves through the formation that are received and interpreted at the surface. This allows for substantially faster transmission rates (4 bits per second and higher) versus Mud pulse. The main drawback of an EM-MWD tool is that certain rock formations block the electromagnetic signal from reaching the surface. As a result, there will be segments where the MWD operator receives no information. Even if this occurs only 5% of the time, it means that rig operators will need to pull out the EM-MWD tool, replace it with the mud pulse MWD tool, and then repeat the process when EM once again becomes viable. All of this translates into more trips for the operator. A trip is a term used to describe the process lowering and retrieving a drill string from a well.

A simple but critical concept to remember here is that the operator is trying to maximize the amount of time that the drill bit is making forward progress and everything that takes away from that leads to higher costs.

PHX'S VELOCITY MWD TOOL: based on our conversations with end customers, we believe that PHX's Velocity tool offers the following advantages to the operator:

RELIABILITY: The feedback received from customers is that Velocity is a more reliable tool, specifically meaning that it is less likely to break in the field than other competing tools (less trips = more savings). Our understanding is that one factor that contributes to better reliability is an innovative design of the mud pulser (tip of the tool that creates fluctuations in mud pressure), which is less susceptible to jamming than traditional designs.

It is also our understanding that the Velocity MWD tool is shorter and thicker than alternative MWD tools available in the market. This translates to better vibration tolerance and contributes to improved reliability.



Source: Picture was taken during our due diligence visit to the Company's Houston's office.

DUAL TELEMETRY: Our understanding is that Velocity is only one of a few tools (we are aware of 2 other vendors that currently offer true dual telemetry, with a third trying to enter the market) available that have mud pulse and EM telemetry options as part of the same tool. The other two vendors are Schlumberger and EVO (co-developed Velocity with PHX). The dual telemetry option allows operators to switch back and forth between mud pulse and EM telemetry. This allows them to get the benefits of the EM tool without having to retrieve and replace the tool - when EM transmission becomes impossible. This significantly reduces the customer's

operating costs as it reduces the number of trips needed to drill a well.

According to customers, the tool has two shortcomings: a lack of an internal turbine (we understand that only Schlumberger has one currently) requiring the tool to rely exclusively on battery power, and a relatively low data transmission rate. However, these same customers made it clear that these drawbacks are minor in the context of U.S. on-land drilling (as opposed to offshore drilling where these drawbacks become more important). Currently, PHX's operations are exclusively focused on on-land drilling and our expectation is that this will remain the case, going forward.

MUD MOTORS

In this section, we will not go into too much detail on how a mud motor operates (this [Wikipedia article](#) does a decent job) except to highlight that it is a mechanical device used to transfer power generated by the drilling fluid to the drill bit. Unlike the MWD tool, the mud motor does not have any electric components and is a relatively simple mechanical device. However, though the device is relatively simple from an engineering point of view, it plays a critical function in the drilling operation, as the speed at which the drilling takes place is, in large part, a function of how much pressure can be applied to the motor (the higher the pressure the faster the drilling speed). At the same time, the increased pressure also leads to increased strain on the motor, and increased probability of failure (more trips = more expensive wells).

Over the last few years, PHX Energy Services has invested capital in designing motors with different diameters (bigger motors can generally tolerate higher pressures) as well as reengineered key components to make the motors more durable. In speaking with end-clients, it appears that PHX Energy Services has enjoyed first-mover advantage with customers praising the reliability of their motors. Our understanding is that PHX Energy Services' Atlas motors have in excess of 50% market share with some of the largest operators in the Permian basin.

STREAM EDR

An Electronic Drilling Recorder can be thought of as an ERP system for rig operators, it aggregates the data generated by the drilling operation and makes it available to rig operators and usually office-based personnel through a broadband satellite or wireless network connection. In Canada, the dominant operator is Pason Systems (ticker TSX:PSI). Stream EDR was commercialized in 2016 but had a number of deficiencies that PHX Energy Services has worked on over the past several years before re-introducing the product in 2019.

Operators in Canada have been looking for an alternative to Pason, who as we understand, has been quite aggressive on pricing and has alienated certain customers. However, PHX Energy Service's efforts so far produced only limited success, with a handful of customers testing the technology. We don't model any meaningful earning contribution from the product, while realizing that it does have some option value. (For context, Pason Systems has \$1B market capitalization, so even a modest share gain by Stream is likely to have meaningful impact on PHX Energy Service's valuation).

BUSINESS ECONOMICS

We believe that understanding PHX Energy Service's business economics is best done through a bottom-up analysis (starting with number of units and utilization), therefore we included this section as to help the reader to independently assess company's fundamentals.

For forecast purposes, we used the top-down approach (starting with industry activity), in a separate section below.

UNDERSTANDING BUSINESS ECONOMICS: THE BOTTOM-UP REVENUE MODEL

The company currently generates revenue under two distinct models:

FULL-SERVICE MODEL: a customer contracts with PHX Energy Services to provide equipment (MWD tool, Mud Motor) and crew. Under this agreement, the customer pays PHX Energy Services an agreed upon day rate while PHX Energy Services is responsible for providing directional drilling services (equipment + labor).

RENTAL MODEL: The company rents out its equipment (currently only its Atlas Motor) to third party directional drilling service providers. (just equipment no labor).

Currently, most of the company's revenue is generated through a full-service model with the rental model being a more recent introduction.

The following equation can be used to visualize the company's full-service model:

Revenue = Number of units * Daily Utilization Rate * Days in a period * Day Rate

- Number of units is simply the number of tool kits owned by the company, specifically the number of MWD kits, as this is usually considered the lynch pin of directional driller services. However, the equipment package that operators rent from PHX can include an MWD tool, a mud motor or a Rotary Steerable System, with a difference in the mix reflected in the day rates charged.

Rented Atlas Motors are not captured in the number of kits. Thus, the rental revenue component can be modeled separately. Alternatively, (as is the current sell-side practice) the incremental revenue generated can be incorporated in the day rate charged by the company. The first approach is practically impossible to implement at this stage as the company does not disclose the number of motors rented during the period or the rate.

As noted previously, a rented tool kit comes with two MWD operators and two directional drillers operating in 12 hours shifts. Their salaries are captured in the day rate charged by the company.

- **Utilization rate** is the percentage of units that are in the field earning revenue. Utilization rates on equipment are relatively low as clients can “request” that PHX Energy Services provides spare tool kits on site to prevent interruptions. Thus, in the case of legacy MWD tools it was not unusual for equipment to operate at ~50% utilization. With improved reliability of the latest Velocity MWD tool (discussed previously), the company can improve utilization into the 70% range by “sharing a spare” between different rigs. Over time, we believe that this will also be true for PHX Energy Services’ Atlas Motors (where, currently, utilization can be as low as 25% or three spares for one working tool).
- **Days in a period:** This is self-explanatory.
- **Day Rate** is the amount the company charges for its services (equipment and labour), with day rate being a function of local market conditions and the mix of equipment that is being rented.

TOP-DOWN APPROACH

Given the available disclosures this is the best available option to model the company’s future earning power.

MODELING EARNING POWER IN 2020

UNITED-STATES

TOTAL INDUSTRY ACTIVITY:

Currently, most analysts forecast a year-over-year decline somewhere in the low teens in 2020 over 2019. These expectations are largely driven by commentary from producers that suggest that they will be more focused on free cash flow generation and return of capital to shareholders as opposed to their historic focus on production growth. We think this is a reasonable base case assumption with perhaps

60%+ probability that the actual will exceed this forecast. On average, we expect approximately 775 horizontal rigs working in the U.S., down from an average of what looks like the ~870 rigs for 2019 (We are writing this report in December of 2019). Accordingly, this translates into an ~drilling days (366 x 750)¹⁰.

MARKET SHARE:

We expect PHX to exit 2019 with approximately 5% market share of the U.S. horizontal rotary rig market. We recognize that this national figure has its limitations as PHX Energy Services does not have a uniform presence across the U.S. (we estimate its Permian market share is in excess of 10%, while it is completely absent from several other basins in the U.S.). That said, we expect the company to continue gaining share across the basins where it operates with national share increasing by 60bps to 5.6% in 2020 (with potential upside to this estimate).

This assumption is supported by the fact that the company has gained close to 2 point of market share over the past two years and we expect company’s relative advantage to persist in the near-term.



Source: Company’s filings, Ewing Morris

REALIZED ACTIVITY DAYS:

Given the two estimates above, we expect PHX to capture 15,884 activity days translating to approximately 40% utilization rate on 105 MWD tools deployed in the (our estimate) U.S.

¹⁰ <https://www.drillingcontractor.org/operator-spending-cuts-may-lead-to-10-fall-in-2020-land-rig-count-54292> this is an example of market commentary on 2020 rig count expectations.

DAY RATE:

As of Q3 2019, the company's day rate was -USD \$13,000 (based on average CAD/USD exchange rate over that period). In an environment where industry activity is expected to decline, we do not expect PHX to raise prices on its full-service business. However, as mentioned previously, with the expected growth in the number of Atlas Motors that the company will rent to third party directional drillers, as well as growth in the fleet of Rotary Steerable Systems (RSS), we do model growth in day rates in 2020. Our expectation is for the average U.S. Day Rate in 2020 to land at USD\$14,000. At current exchange rates this translates to CAD\$18,400.

CANADA

TOTAL INDUSTRY ACTIVITY:

Despite what has been a terrible 2019 for the Canadian Energy sector (over 30% decline in activity), we don't expect a rebound in 2020. In fact, our expectations are for another -10% decline in 2020, translating to -40,000 rig operating days. I will note that our forecasts are below those provided by Canadian Association of Oilwell Drilling Contractor by about 14% for 2020.

MARKET SHARE:

We expect the company to exit 2019 with 16% market share and don't expect any market share growth in 2020. The difference in market share expectations between the U.S. and Canada is that PHX, for the most part, is going to deploy its latest technology in the U.S. where it can get better pricing. Thus, its Canadian fleet will not enjoy the same technological edge as its U.S. fleet, and accordingly our expectations for stable market share.

REALIZED ACTIVITY DAYS:

This forecast translates to expectations that PHX will be able to capture 6,400 activity days in Canada

DAY RATE:

As of Q3 2019, average day rates in Canada were \$8,648/day. Q2 in Canada is a somewhat unusual period as activity levels drop due to "Spring break-up" (not to be confused with a band by the same name). For the whole of 2019 we are forecasting an average of \$8,500/day. We don't forecast any improvement in day rates in Canada in 2020. Again, the difference in fleet composition and the fact that Atlas motors are likely to work in the U.S. explains the difference in our expectations for Canada and U.S.

TOTAL CANADIAN REVENUE:

Activity days (6,400) * Day Rate (CAD\$8,500) = \$54.4MM.

INTERNATIONAL

The international business consists of the company's operations in Russia and Albania. These markets are hard to forecast on the same top-down basis as the rest of the business. Over the past five years the business generated as much as \$51M in revenue in 2014, and little as \$16M in 2016. In 2017 and 2018 revenue generated was \$19M and \$18.4M, respectively¹¹.

Our expectations are that this business remains stable at the current level of \$19M in 2020

We realize that this is a lazy forecast, however, given the size of this business and lack of better data inputs, our view is that even if this business went to zero (unlikely in the short-term) this would not impact the investment thesis for PHX.

¹¹ Source: Company filings

We would also note that assuming the business returns to average revenue seen over the past five years the international revenue would be closer to \$30MM, reinforcing the fact that our international forecast is quite conservative.

STREAM EDR REVENUE AND EBITDA

We expect Stream EDR to contribute approximately \$4M in Revenue in 2019 and model a similar number in 2020. We expect EBITDA contribution to be approximately \$2M.

2020 REVENUE FORECAST:

U.S. - \$292.3M

Canada - \$54.4M

International - \$19.0M

Stream EDR: \$4.0M

Total Revenue - \$369.7M

REVENUE FORECAST BEYOND 2020

Our approach to forecasting the company's earning power over the next five years incorporates the following key assumptions:

1. Assume very modest Oil production growth in the U.S.
 - It is important to note that one characteristic of unconventional hydrocarbon deposits is that they tend to have high decline rates. A decline rate is a rate at which production from a well decline, as function of time. It is not uncommon for production rates for unconventional deposits to decline by as much as 50% after the first 12 months of production. This means that if no new wells are put in production U.S. production will fall-off quickly.

Although it is difficult to say with certainty, the industry believes that sustaining rig count (flat production) is

somewhere between 650 and 750 rigs. Thus our 2020 forecast is just modestly ahead of this sustaining level.

2. Assume no further improvements in market share
 - Arguably this is a conservative assumption over the next three years, but our base case assumes that PHX will stop gaining share.
3. Day rates stay flat
 - As discussed previously, there are multiple puts and takes that go into day rates and over the forecast period, they are likely to move around. However, given that increased rental revenue should have a positive impact on day rates as presented, currently we view this as quite a conservative assumption.
4. No rebound in the Canadian business in 2020 or beyond.
 - There are reasons to believe that the Canadian business should see improved results over the next five years, relative to 2019, these include:

Increased off-take:

1. LNG Canada should drive demand for natural gas production in western Canada. LNG Canada construction is well underway and at this stage the probability of this project being canceled seems remote.
2. Additional LNG projects. There are other projects in addition to LNG Canada that could be launched over the forecast period increasing demand for Canadian natural gas.
3. New pipelines. Currently there are several pipeline projects on the table, should any one of these be completed it will improve fundamentals for Canadian oil, hopefully translating to lower price differentials and increased drilling activity.

However, for the purposes of our model, we assumed that none of these materialize.

MODELING RETURN ON REVENUE

GROSS MARGINS:

For the purposes of Gross Margin discussion below we excluded the depreciation and amortization expense line item from Direct Costs. This is not to suggest that we don't believe Depreciation and Amortization is a real expense, it certainly is, and is tackled separately in a dedicated section. We simply believe that business economics can be more clearly understood if this line-item is discussed separately.

[See figure below]

As can be seen from the graph above, since Q1 2014 the company's gross margins (ex. D&A) have been as low as 11.8% in Q2 2016 and as high as 30.6% in Q4 of 2015

The volatility in gross margins is caused by the combination of the following factors:

1. Time lag between declining activity levels and costs. For example, field labor (comprised primarily of directional drillers and MWD operators), typically accounts for 35-40% of Direct Costs and although it is flexible in the medium-term, the adjustment is not immediate. Furthermore, if the management believes that the change in industry activity is not permanent then it might make sense to run with higher expenses, because when activity levels return, it might be difficult to find good people.

2. Impairment charges and write downs in the period of abrupt activity declines. It should be noted that the severity of decline in activity levels seen between 2014 and 2016 had not been seen in a long time. This called for inventory and equipment impairment charges that are not normal course.

Over the medium to long-term, most of the company's Direct Costs (ex depreciation), are largely flexible with labour (35%), equipment costs (including repair parts) (~35%) accounting for the majority of the expenses.

The company does not breakdown gross margins by geography but given depressed activity levels in Canada, we estimate that Canadian gross margins are 5-10% below U.S. margins.

It should also be noted that rental margins are substantially better than full-service margins as there are no labour costs (where mark-up opportunity is limited). Therefore, as contribution from rental revenue increases, we should expect a positive impact on the company's gross margins.

For modeling purposes, we assume that PHX will end 2019 with 26.5% and we forecast 2020 cash gross margins to be at 27%, as additional rental revenue from the Atlas fleet more than offsets margin pressures in Canada.

Thus, our 2020 Gross Profit ex. D&A is expected to be ~\$100M.

In our base case, we assume gross margins ex. D&A stay flat in that normalized 27% range.



Source: Company filings, Ewing Morris

DEPRECIATION AND AMORTIZATION

We believe that depreciation is a real expense for most energy services companies and PHX Energy Services is no exception. However, economic depreciation does differ from accounting depreciation.

For accounting purposes, PHX Energy Services uses straight line depreciation for most of its assets, recording an expense regardless of whether the asset is being used or not, while economic depreciation is largely a function of the asset being used in the field. Thus, in periods of low utilization, accounting depreciation tends to understate a company's earning power.

For example, assume that a client requires PHX Energy Services to provide one spare Velocity MWD tool for a job. For accounting purposes, this tool is being depreciated at the same rate as the tool working in the ground, while its economic value arguably remains unchanged.

Furthermore, when the company's equipment is lost during the drilling process ("lost in hole equipment") the company tends to receive compensation that exceeds the book value of the assets (as evidenced by gains on disposition historically recorded by the company).

The company believes that it can maintain current earning power of its assets spending between \$10-15M in capital a year vs. accounting depreciation and amortization of ~\$40M a year (in addition to maintenance expenses reported in Direct Costs). We have no reason to believe that this figure is drastically understated.

SELLING, GENERAL AND ADMINISTRATIVE EXPENSES

This is a somewhat of a catch-all category that includes all personnel costs that are not field related, rent, insurance and sales tax, travel, stock-based compensation, etc. In the first three quarters the SG&A expense averaged \$11.7M. This includes stock-based compensation that introduces

an element of volatility to these figures, as stock-based compensation is impacted by the stock price.

Through the 2016 adjustment SG&A went down to \$31.6M (with \$3.1M in stock-based compensation).

We forecast cash SG&A expenses to remain at current levels of approximately \$10.1M a quarter, and we understand that the company will have flexibility to ramp this line down should activity slow below forecasted levels. We believe the company is generally comfortable with modeling 11% to 12% of revenue for this line-item as this has been a normalized level of spend over the past several years.

The key takeaways are that we don't expect SG&A spending to be outside of the historic bounds and should market conditions deteriorate, we know that the company has room to bring these expenses down by at least 25%.

RESEARCH AND DEVELOPMENT

Prior to 2015, R&D expenses ran between \$3-4M/year. Since 2016 the R&D spend has been closer to \$2M/year. Having completed major work on Velocity, Atlas and Stream, our expectations are for R&D to remain at this \$2M level, going forward. We certainly don't forecast major investments outside of meaningful rebound in activity levels.

MAINTENANCE CAPITAL

One reason why energy services companies now trade at low EV/EBITDA multiples is that investors have finally come to realize that depreciation is a real expense and that EBITDA (as usually calculated) is a poor proxy for "cash earnings". Today, most Canadian energy services companies are faced with declining revenues and are in a precarious financial position. Thus, whatever capital they do spend on equipment is likely to be the minimum amount needed to maintain their current earning power (and many probably underspending that minimum and in the process cannibalizing their idle fleet).

PHX Energy Services, on the other hand, is going to have its second-best year in 2019 (with the 2014 peak being the best year) and will have more than doubled its revenue since 2016. Additionally, as outlined above, they are expected to grow revenue again in 2020. This growth is the result of the company's investments in new equipment (Velocity MWD tools and Atlas mud motor being the two largest components). Clearly, some portion of historic capital spending went into growing the company's earning power.

From 2015 to the end of 2019, that PHX Energy Services' total capital spend was ~\$120M. We estimate that at least 60%-70% of that capital was spent on growth and the balance on maintenance.

It is important to note that the \$120MM figure above is "gross" of lost-in-hole proceeds (included in "Proceeds on Disposition of Drilling Equipment" line on the cash flow statement). These proceeds totaled \$40M from 2015 to Q2 of 2019. This line-item is difficult to model on a quarter-over-quarter basis, but lost equipment is a normal part of drilling operations and is likely to remain recurring in nature.

Based on the discussion above, we believe that it is conservative to assume that the company will be able to maintain its 2020 earning power with \$10M of net capital investment in equipment. In 2020 we forecast total capital spending of \$20M.

BALANCE SHEET

As of September 30th, 2019, the company's balance sheet was:

Cash and cash equivalents: \$6.7MM

Bank Operating facility: \$6.6MM

Loans and borrowings: \$15.0MM

Net-debt: ~\$15M representing approximately 0.3x turns of leverage. Our expectation is that through Q4 the company will be able to reduce its leverage further while at the same time continuing to buy back stock.

The company has a lease liability of \$40.8M reported on its balance sheet (as per IFRS 16 requirements). It certainly makes sense to consider this liability when estimating liquidation value of the business, but we exclude it from debt calculation when evaluating PHX Energy Services on going concern basis.

The key takeaway here is that the company has a pristine balance sheet and is likely to have no net debt by mid-2020 if our expectations regarding the company's earning power prove to be accurate.

CAPITAL ALLOCATION

Below is the summary of management's capital allocation from 2016 up until September 30, 2019.

	2016	2017	2018	YTD 2019
Cash flow from Operations	6,982,095	826,043	18,597,793	32,945,074
Acquisition of Drilling and Other Equipment	(7,811,179)	(25,673,004)	(35,027,380)	(28,840,422)
Proceeds on Disposition of Drilling Equipment	4,535,991	11,575,430	14,583,922	11,823,951
Net CapEx	(3,275,188)	(14,097,574)	(20,443,458)	(17,016,471)
Net Repayment of Loans and Borrowings (including the operating facility)	(31,004,592)	(15,425,133)	5,549,098	(6,876,327)
Proceeds from New Equity Capital Raised	23,438,637	29,154,582	76,916	87,750
Repurchase of common equity	0	(426,461)	(1,207,324)	(9,324,191)

Source: Company's financials

Notes:

1. Cash flow from Operations includes all of non-cash working capital changes (while the company splits them for reporting purposes between operating and investing sections).

2. Payment of lease liability is taken out of Cash flow from operations.

A few items from the table [on previous page] merit a dedicated discussion:

SHARE ISSUANCE IN 2016 AND 2017

Having entered the 2014 downturn unprepared and with over \$100M in debt, the company was forced to raise equity in 2015 (not included in the table above), 2016 and 2017. The raises were needed to pay back the banks but also to continue investing in new technologies and tools.

The June 2016 capital raise was done at \$2.70/share (above current price), with insider participation

In February 2017, the company raised capital at \$4.00/share (well above current price) again insiders participated in this raise.

Clearly these two capital raises don't look great (especially the 2016 raise), however we should remember that the severity of the 2014 downturn was quite unexpected especially in the context of broader economic growth, and all stakeholders that we know in the energy segment were caught unprepared. That said, we believe that PHX Energy Services management and the board have learned valuable lessons from the downturn and going forward we would expect relatively modest levels of financial leverage in the business. We certainly don't expect another capital raise anytime soon.

At the same time, we believe that management deserves credit for having the foresight and conviction to take a long-view and make necessary investments in differentiated

technology that has allowed for substantial growth in the company's earning power and, we believe, value (even if not the stock price).

SHARE BUYBACKS - AN IMPORTANT CATALYST GOING FORWARD

Over the past year, PHX Energy Services has aggressively been buying back its own stock. Since November 2018, the company has bought back in excess of 3.1M shares through its Normal-Course Issuer Bid (NCIB). For context, the company had ~58M shares outstanding as of December 31, 2018. The weighted average price paid for stock was \$3.05/share.

We expect the company to remain active on its NCIB through the rest of 2019 and into 2020, executing up to a maximum allowed amount. Additionally, there is a real possibility that the board decides to accelerate share buybacks through a Substantial Issuer Bid as a potential alternative/complement to a special dividend/regular dividend. The fact of the matter is that we expect PHX Energy Services to generate a substantial amount of FCF in 2020 after making needed investments in the business.

With free cash flow yield to equity of ~25%, the board does not need to rely on markets to reprice the business, they can theoretically buy all the equity back in four years. And PHX Energy Services, unlike the vast majority of energy services companies, actually has a track record of taking advantage of its mispriced equity in the market.

ACQUISITIONS

The company has not spent a meaningful amount of capital on M&A in the past, and we would be very surprised (and not pleasantly) to see the company do a major acquisition over the next 3 years. Our work suggests that the company has the best technology on the market and its next dollar of capital will have a much higher return if it invested in reducing the share count vs. buying another directional driller.

A QUICK NOTE ON MANAGEMENT

The key point that we want to convey here is that the company is being lead by a group of executives that not only have a meaningful portion of their net worth invested in the business, but have also been together for a long time, thus we believe the risk of thoughtless value destruction is significantly less than what one might expect in a company of this size.

John Hooks is the Chief Executive Officer of the company and is responsible for major capital allocation decisions at the company. John owns approximately 14.5% of the company's equity, making him the second largest shareholder in the company.

Mike Buker is the President of the company and oversees company's day to day operations. Mike begun his career as an MWD tool operator and then moved through a number of sales positions within PHX Energy Services. As most of the senior executive team, Mike has been with the company for a long time (almost 22 years). He recently moved his family to Houston as the United States has become the company's main market. Our assessment is that Mike is a proven operator and we believe he deserves a lot of credit for company's strong recent performance.

2020 EARNING POWER

Revenue	369.7
Direct Costs	271.7
Gross profit	98.0
Expenses	
Selling, general and administrative	40.5
Research and development expenses	2.0
Stock based compensation	3.0
Lease costs	3.0
Fully loaded EBITDA	49.5
Interest on debt	0.5
Cash taxes paid	0.5
Cash earnings	48.5
Maintenance CapEx - Net	10.0
Growth CapEx	10.0
Cash flow to equity	28.5
Free cash flow to equity	38.5
Market Capitalization	150MM

Source: Ewing Morris

The table below outlines our expectations for the company's earning power in 2020.

VALUATION

For the purposes of this section we are using the price of **\$3.00/share** as opposed to the current market price of \$2.70/share. We believe a prospective buyer looking to accumulate a sizable position will have to pay close to ~\$3/share to accumulate a position, and therefore is the appropriate price to use for evaluating the investment opportunity.

Share price: \$3.00

Shares outstanding: 54,969,320

Market Capitalization: \$165MM

Net Debt: \$15MM (excludes operating leases)

Enterprise Value: \$180M

EV/2020 EBITDA = 3.6x

Market Capitalization / Free Cash Flow to Equity: 4.3x

To answer the question of whether this valuation is attractive on absolute basis we present the following set of potential scenarios.

SCENARIO 1: Zero terminal value in five years.

We don't know of any market pundit who is currently forecasting the demand for hydrocarbons to disappear in the next five years but let's assume that it does what type of IRR should we expect if that scenario proves to be accurate.

Assuming, that the business is worthless in five years (zero terminal value), the annualized IRR, assuming the investor pays \$3.00/share to accumulate the stock is 0.51%, basically the investor can just expect to get their capital back. We think this scenario represents the worst possible case and would assign to it a probability of 5% or less. However, given how attractively this business is priced today even in this scenario we believe the investor is unlikely to lose money.

SCENARIO 2: Terminal value at existing multiple.

In this scenario we assume that the multiple assigned to the business does not change in five years and an investor will be able to exit the position at 3.6x 2025 EBITDA (that we assume does not change from current levels). Under this scenario the annualized IRR on the investment is going to be 20.4%¹².

SCENARIO 3: Assume exit multiple reverts to the historic mean of 6.5x¹³.

Under this scenario the investor buying equity at \$3.00/share is looking at 30% IRR over 5 years.

DISCOUNTED CASH FLOW MODEL

Given the current free cash flow yield a DCF model that assumes a terminal value for this business will translate into a fair price that is significantly in excess of current market price. Just for reference using a 15% discount rate (using modern portfolio theory would produce a lower cost of equity estimate) with 2% terminal growth rate translates to fair equity value of \$6.8/share.

We could have presented a more sophisticated DCF model that justifies an even higher “fair value”, but this is not our aim. Our message is simple: when you buy a business with close to 30% Free Cash Flow Yield, unless the earning power of this business disappears quickly (in less than five years) you are likely to generate very attractive returns.

Our thoughts on fair value are as follows: At \$5 or \$6/share assuming earning power of the business remains unchanged, PHX Energy Services would be generating FCF yield in high teens, an attractive valuation for buyers and we believe palpable to the sellers. Thus, we believe that fair value of equity is at least \$5/share.

COMPARABLE VALUATION

Note: in this section we add lease and equity compensation back to the EBITDA to allow for apple to apple comparison with other competitors in the space.

The table below shows current market multiples Canadian Energy Services companies:

	EV/2020E EBITDA
Contract Drilling & Well Servicing	
Precision Drilling Corporation	4.5
Ensign Energy Services Inc.	4.7
Western Energy Services	10.9
Average	6.7
Drilling & Production Services	
Pason Systems	7.3
CES Energy Solutions Corp.	5.7
Cathedral Energy Services	3.5
Average	5.5
Completion Services	
Trican Well Services	9.1
Calfrac Energy Services	8.0
Ensign Energy Services	3.0
Source Energy Services	5.9
Average	6.5
PHX Energy Service	3.6

Source: Company Filings, Peters & Co., Ewing Morris

As stated previously in the report, PHX Energy Services has had significantly better performance over the past three years than most of the companies on the list and yet trades at a multiple discount of 35% to 46%, depending on the group. Assuming we use the Drilling & Production Services group multiple than the fair value for PHX would be around \$5.25/share.

¹² Assumes all of the debt is paid down, a rather conservative assumption.

¹³ This 10-year average multiple, source capital IQ

RISKS

INDUSTRY ACTIVITY:

Obviously a broad decline in drilling activity, particularly in the U.S. will have a negative impact on the company's operations as it will impact the number of operating days, and possibly day rates. There are several factors that can impact industry activity levels which we discuss below.

DECLINE IN OIL/GAS PRICES:

A decline in commodity prices, without a corresponding decline in the cost of extracting this commodity from the ground, will lead to lower activity levels as it becomes uneconomic (negative returns on capital) for service companies to serve their customers. Factors that can lead to a decline in oil prices:

U.S. / GLOBAL RECESSION:

As economic activity slows, the demand for oil derivatives (gasoline, plastics, etc.) and, correspondingly, oil will decline. The severity of the decline in oil prices will depend on the severity of economic contractions and on the response of the supply.

It is important to note that although these declines will likely result in a short to medium impact on PHX's operations, an economic slowdown will not have a permanent impact on the company's earning power as PHX is capitalized to weather a temporary slowdown in activity (as discussed previously).

DECREASE IN GLOBAL DEMAND DUE TO RISE OF AUTOMOTIVE ELECTRIFICATION:

In the United States most of the oil is consumed in the distribution of people and goods. The increasing popularity of electric vehicles (EVs), that we expect to continue, raises the question of whether we are about to experience a structural decline in oil demand. We believe that the adoption of electric

vehicles in United States is going to prove disappointing to those who expect an extremely rapid adoption curve (we have seen some estimates that forecasted market share rates in excess of 20% by 2025). In 2010, Businessweek forecasted 6% market share for EVs in U.S. by 2016. The actual was only 0.9%. Similarly, we expect the 2025 actuals to fall far short of current expectations.

Our reservations relate specifically to infrastructure (electricity generation, transportation, charging infrastructure, etc.) to satisfy current optimistic expectations for EV adoption.

Furthermore, one needs to consider the sources of electricity used to power EVs. If the U.S. outlaws hydraulic fracturing (discussed further in this section), the cost of owning an EV will likely go up and the net impact on the environment is actually likely to be negative.

In conclusion, we expect continued adoption of EVs globally, but expect that the adoption curve will be much flatter than most people expect. For more on this important topic we recommend the works of a fellow Canadian, [Vaclav Smil](#).

INCREASE IN SUPPLY:

An increase in supply from countries other than the U.S. will lead to lower oil prices and reduced activity in the U.S. The reason that we are not as concerned about increased U.S. production is because it will most likely require an increase in U.S. drilling activity (positive for PHX). In 2014, faced with increased output from the U.S., OPEC (Saudi Arabia) made a calculated decision not to cut production. It appears that OPEC was betting that declining oil prices would lead to the demise of the U.S. fracking industry that was thought to be uneconomic with oil under \$50 WTI. In the short-term, this strategy appeared to work as the number of oil rigs declined from more than 1,600 to just over 300 from October 2014 to May 2017¹⁴.

¹⁴ Source: Baker Hughes.

However, this downturn forced the U.S. producers to make significant improvements to their process and eventually led to an industry with a significantly improved cost curve that could remain viable even at lower oil prices. Eventually, OPEC had to capitulate and reverse its approach. At this stage it is unlikely that OPEC will once again embark on a strategy of trying to drive U.S. shale producers out of business (they simply can't afford to).

NEW DISCOVERIES:

Obviously, a major new discovery of oil deposits that are economic at prevailing or lower WTI prices outside of N.A. will likely have a negative impact on the U.S. production. Given how much capital and energy (refers here to human effort as opposed to hydrocarbons) has been spent over the past 150 years, it seems unlikely that a major discovery of a previously unknown oil reserve, with fantastic economics, will be found in the next ten years, although smaller discoveries are certainly possible.

More likely, we will see continued improvement in extraction technologies that make accessing known reserves more economic. For example, China has significant shale gas and oil reserves, however, the area where those deposits are located has limited access to water, making slickwater fracturing impracticable. Should new fracturing technology that requires significantly lower quantities of water become available it will likely have a negative impact on global Oil and Gas prices.

BAN ON HYDRAULIC FRACTURING

Elizabeth Warren (one of the frontrunners for the Democratic Party nomination) has publicly stated that she intends to “ban fracking everywhere”.

First, it is important to note that a national ban on hydraulic fracturing is exceedingly unlikely as most hydrocarbon development takes place on private property, with federal land representing only 12% of all active permits. Oil production associated with federal land is higher at 22%,

but largely concentrated offshore (where PHX is not a player). Even if we assume a ban only on federal land, this will likely lead to higher oil prices globally (RBC-estimates \$5-10/barrel) although no one really knows.

The mitigating factor for PHX (in the case U.S. drilling activity declines) is that it will see meaningful improvement in Canadian and international business. Furthermore, one would also likely see an increase in drilling activity on privately owned land.

At this stage, we do not believe that the election of Elizabeth Warren as the next President of the United States poses a risk to PHX's earning power, even if her election might pose a “headline risk” for the stock.

Part of the conversation around the ban of hydraulic fracturing is around the environmental impact that largely focuses on groundwater contamination (as the result of poor well cementing). We believe that there are certainly negatives that are associated with hydrocarbon extractions and the industry should continue to take these concerns seriously and take active steps to minimize the negative impact it is having on the environment. However, the bulk of evidence suggests that development of U.S. shale reserves has had a net positive contribution on the environment through substitution of coal by natural gas. We do realize that natural gas is not a perfect fuel, but we don't believe that a wholesale change to 100% renewable energy in the U.S. is possible that math simply does not work.

EROSION OF TECHNOLOGICAL EDGE:

At this stage we believe there is strong evidence that PHX has a differentiated portfolio of products in the market. However, we also realize that this advantage is not permanent even if we can't definitively say how long it can last. There are several factors that we believe position PHX well over the next several years:

Given the recent contraction in U.S. drilling activity, the general financial health of the company's directional

drilling competitors has deteriorated, making it harder for them to catch-up with PHX. Below we contrast the Y/Y revenue growth of PHX with another Canadian publicly traded directional drilling company Cathedral Energy Services.

In addition to declining top-line over the past six months, Cathedral currently has very limited access to capital with its market capitalization declining from \$75M, as of Q1 2018, to \$11M, currently. We believe that Cathedral's story is shared by a number of directional drillers who, unlike PHX, did not make necessary investments in technology through the 2014-2017 downturn, and now don't have the capital to catch-up.

1. As outlined previously, the majority of PHX's competitors don't own their own tools. This puts PHX in an advantageous position where it can iterate tool design at a faster rate than its competitors. We believe that the Velocity MWD tool is a good illustration, where the company was able to improve reliability post launch by getting quick feedback from its operators in the field on what components were susceptible to failure.

- The oil and gas industry not generally known for its rapid pace of innovation. As the section on hydraulic fracturing illustrates, the Oil & Gas industry moves slowly with the adoption of new technology (as opposed to consumer electronics sector for example).

Again, we are not suggesting that PHX has a "twenty-year moat", but we feel comfortable that, under current management, the

company can maintain its earning power over the next three to five years.

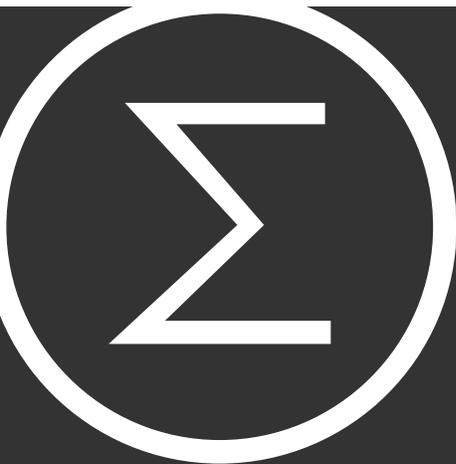
SELL-SIDE COVERAGE

According to Bloomberg the company is currently covered by six analysts. We leaned on analysts from Peter's & Co., GMP, First Energy and Scotia Bank in conducting our research (as evidenced by references in this report) and would recommend all three as great resources for anyone looking to ramp-up on the stock beyond this report.

That said, Peter's Co. has done most of the trading in the name over the past twelve months and in our opinion, Jeff Fetterly, who covers the stock for Peters, does fantastic job.

CONCLUSION

As this report illustrates, we believe that PHX Energy Services currently presents one of the most attractive opportunities we have encountered in the micro-cap universe. We believe that the business trades at a meaningful discount to private market value and we expect the board to continue shrinking the number of shares outstanding through normal course issue bid and potentially through a substantial issuer bid in 2020. And if the market fails to appreciate the intrinsic value of the business we would not be surprised if this asset ends up being sold to a strategic at a significant premium to current prices.



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FINALIST MICRO CAPS



Christian Mienert

Ambra Capital Management

💡 Stage Stores Inc Com

RETURN TO DATE:

▲ 69.84%

Asset: Equity

Symbol: SSI:US

Idea Posted: 12/5/2019

Idea Updated: 12/9/2019

EXPECTED RETURN:

61.46%

↑ LONG

ATTACHMENTS



TIMEFRAME

1-2 Years

SITUATION

Deep Value

MARKET CAP

270M USD

Transition to higher margin, higher growth, pure play off-price retailer.
Currently trading at 0.3x EV/sales



About Christian Mienert

Christian grew up in Germany and moved to New York in 2005 for his MBA at Columbia Business School. He is also a CFA charterholder. After his internship at JPMorgan in London in Equity Research, he joined UBS investment banking in New York as an Associate. He then joined the M&A advisory firm The Valence Group, the largest M&A team for the chemicals and materials industry, advising on billion dollar M&A transactions. After eight years, he joined BDA Partners as Co-Head of Chemicals, and traveled to clients in Japan, Korea, China, Hong Kong, Taiwan and India. He enjoys financial modeling, developing insightful in-depth analysis of companies.



About Ambra Capital Management

Led by former M&A investment banker, with 12 years of experience conducting in-depth analysis of companies, valuing them, and developing investment and divestment theses. Situational, focus on selected few public companies with niche characteristics and potential of significant value change through catalysts.



FINALIST MICRO CAPS



William Mueller

Chief Investment Officer at Mink Brook Capital

Fonar Corp

Asset: **Equity**

Symbol: **FONR:US**

Idea Posted: **12/5/2019**

Idea Updated: **12/8/2019**

RETURN TO DATE:

 **-1.41%**

EXPECTED RETURN:

114.18%

 **LONG**

ATTACHMENTS



TIMEFRAME

1-2 Years

SITUATION

Value

MARKET CAP

130M USD

A growing, capital efficient, recession resistant healthcare play trading at 15% FCF yield to enterprise value.

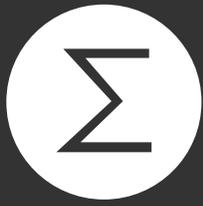


About William Mueller

Will is the founder and CIO of Mink Brook Capital LLC, a special situations hedge fund based in Boston. Previously, Will was a portfolio manager and analyst at Monashee Investment Management, a \$1bn+ special situations hedge fund in Boston. Will started his career at Bank of America Merrill Lynch in the investment banking division. He graduated from Dartmouth College in New Hampshire.

About Mink Brook Capital

Mink Brook Capital LLC is an investment manager focused on micro- and small-cap investing. The company looks for attractive valuation entry points and looks to invest for 1-2 years, with a noted emphasis on catalysts in the future and under-followed companies that are out of conventional indexes. Mink Brook was founded by William Mueller in 2019. Previously, Will was a Portfolio Manager at Monashee Investment Management, a \$1bn+ asset manager in Boston. Will was an analyst in the biotech space at Monashee before running a portfolio, and previously worked in the investment banking division of Bank of America Merrill Lynch.



SMALL CAPS

Ideas on companies whose respective market capitalizations were between US\$300M and US\$2B at the time of submission.





WINNER SMALL CAPS



Abel Gizaw

Portfolio Manager at Gizaw Capital Partners

BADGES:

Ituran Location & Control Ltd Ord

RETURN TO DATE:

6.25%

Asset: **Equity**

Symbol: **ITRN:US**

Idea Posted: **12/19/2019**

Idea Updated: **12/15/2019**

EXPECTED RETURN:

57.79%

LONG

ATTACHMENTS



TIMEFRAME

2-5 Years

SITUATION

Growth At Reasonable Price

MARKET CAP

532M USD

A market leader in a niche business with a subscription revenue that generates high returns on capital & a growing private investment on the balance sheet which can unlock meaningful value.



About Abel Gizaw

Abel is the founder and portfolio manager of Gizaw Capital, a hedge fund based in San Francisco, CA. Gizaw Capital aims to achieve superior returns by managing a concentrated portfolio of high-quality companies that have substantial competitive advantages, great growth potential and are run by trustworthy management teams whose interest align with shareholders.



About Gizaw Capital Partners

Gizaw Capital is a value-oriented investment firm that seeks to generate high absolute returns and compound capital over a long period of time. We aim to achieve superior returns by managing a concentrated portfolio of high-quality companies that have substantial competitive advantages, great growth potential and are run by trustworthy management teams whose interest align with shareholders.



Gizaw Capital Partners is actively seeking capital on SumZero's Capital Introduction platform. To be connected, please reach out to capintro@sumzero.com.

Ituran Location & Control Ltd Ord

Asset Class: **Equity**

Symbol: **ITRN:US**

Updated: **12/19/2019**

Submitted: **12/15/2019**

Pricing & Return Details

↑ **LONG**

EXPECTED RETURN	57.79%
TARGET PRICE	40.00 USD
INITIAL PRICE	23.86 USD



BY:

Abel Gizaw

CURRENTLY AT:

Gizaw Capital Partners

A market leader in a niche business with a subscription revenue that generates high returns on capital & a growing private investment on the balance sheet which can unlock meaningful value.



ASSET CLASS:
Equity



SITUATION:
Growth At
Reasonable Price



TARGET ALLOCATION:
5% - 10%



CATALYSTS:
N/A



TIMEFRAME:
2-5 Years

INVESTMENT THESIS

INTRODUCTION

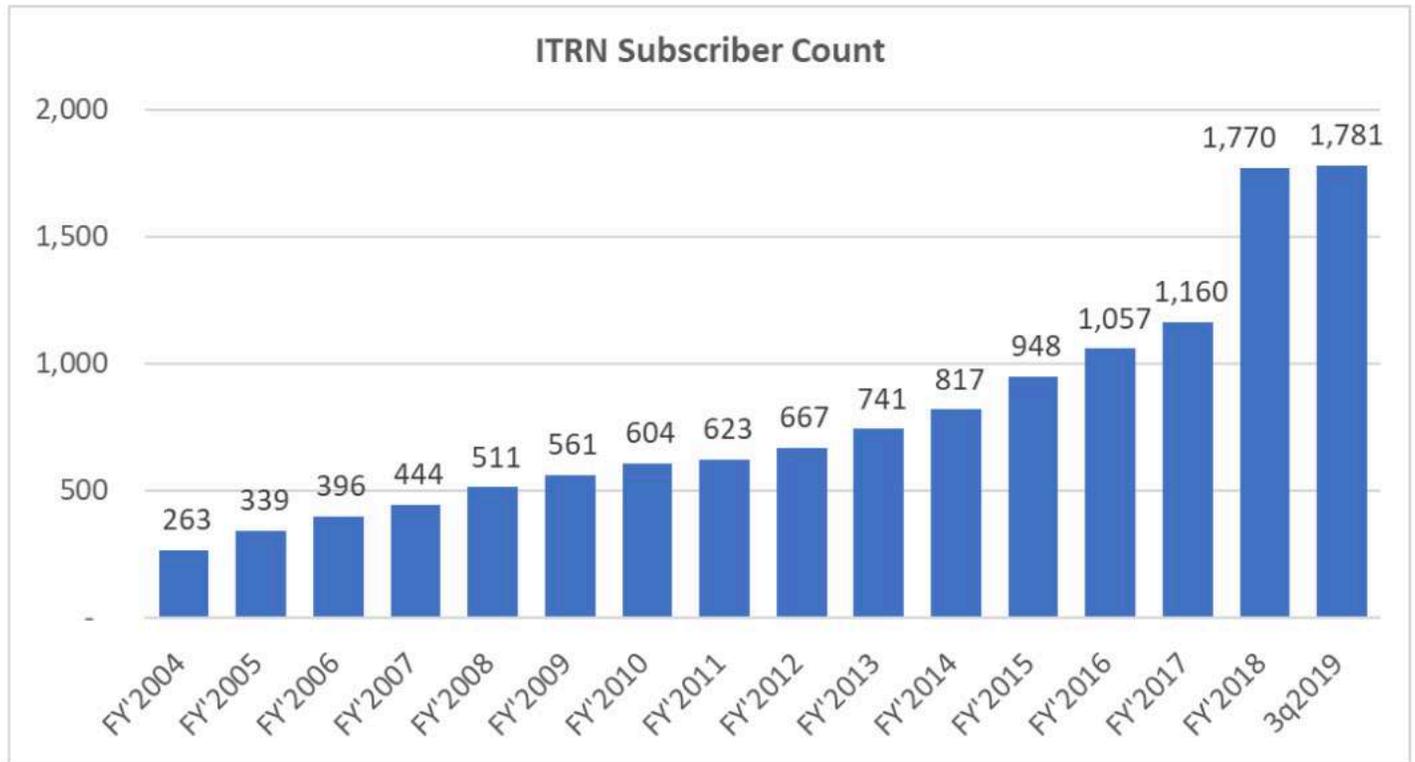
Ituran Location and Control Ltd (ITRN) is a \$500M market cap business headquartered in Israel. The Company leverages a technology originally developed for the Israeli Defense Forces to provide telematics services primarily used for stolen vehicle recovery (SVR) of medium- and high-end cars and commercial vehicles. Ituran provides these services using a recurring subscription fee model (~70% of revenue) and one-time product sales (~30% of revenue). The company has ~1.78M subscribers – with operations primarily in Israel (~30% of subscribers), Brazil (~30% of subscribers) and the balance throughout Argentina and Mexico. Ituran has thwarted the theft of 28,000+ vehicles with a value in excess of \$2B.

WHY DO I LIKE ITURAN?

1. SUBSCRIPTION REVENUE:

Ituran enjoys a highly-visible subscription revenue. This is primarily because the company provides its stolen vehicle recovery (SVR) services in countries (Israel and Brazil) with high car theft rates. In Israel, subscription tend to be stickier because insurance companies encourage/require high-end car owners to subscribe to SVR services. In Brazil, given the high crime rate and the large uninsured population, Ituran has enjoyed a growing subscription base. Some Brazilian customers will stop paying their insurance premium and instead pay the monthly fee to Ituran. As the market leader, Ituran benefits from these dynamics – both in capturing new subscribers as well as retaining existing subscribers.

Subscriber Base (000's)	FY13	FY14	FY15	FY16	FY17	FY18
Israel	310	340	381	443	501	551
Brazil	262	298	368	398	438	555
Other	169	179	199	216	221	664
Net Subs	741	817	948	1,057	1,160	1,770
yoy %	11.1%	10.3%	16.0%	11.5%	9.7%	52.6%
Avg Monthly Churn	2.9%	3.0%	3.3%	3.1%	3.2%	2.8%



Over the past 15 years, Ituran's subscriber base has grown at a CAGR of 15% (Net of an average ~3% monthly churn rate).

2. HIGHER RETURNS ON CAPITAL AND INCREMENTAL MARGIN:

Ituran enjoys strong operating leverage with higher incremental margins. This is because they have a very minimal cost associated with adding new subscribers as they can scale on their existing infrastructure. ITRN's infrastructure is generally a fixed cost and encompasses deploying a network of base stations in a region and staffing its 24-hours control center. Once this infrastructure is in place, the true cost of adding the incremental subscriber is very low. Ituran had consistently delivered ~50% GP margins and should generate

40%+ ROE as they continue to grow their subscriber base.

Temporary issues depressing recent performance:

1) Ituran operates in the local currency but reports results in USD. As a result, P&L was recently negatively impacted by FX. **2)** 2G networks in Mexico being phased out – as a result, OEM customer in Mexico was depleting inventory of existing systems before upgrading to the next generation 3G-based systems. **3)** Due to the weak economy in Brazil and Argentina, OEM customers reduced the subsidized free trial period from six months to three months, which impacted the number of OEM subscribers. Most of these issues are temporary, and more importantly, behind the Company and we should see growth (20,000+ subscribers per quarter) with higher incremental margins resuming in 2020.

3. RUNWAY FOR GROWTH:

In Israel, Ituran is the market leader and is considered a monopoly; management claims ~80% market share. The Company is currently experimenting on User-Based Insurance with insurance providers as a new growth driver in Israel. The team has announced agreements with [Harel Insurance](#) and Shlomo Insurance. Brazil is a more fragmented market - there are 90M+ registered vehicles and a large uninsured population. Ituran is one of the market leaders in Brazil with ~555K subscribers and a long runway for growth. Over the past 5 years, car registrations in Brazil have averaged ~200K cars per month. Ituran's recent acquisition of Road Track Holding should also provide an opportunity to expand its OEM business in Latin America. Additionally, ITRN plans to venture into the Indian market (250M+ registered vehicles).

4. BALANCE SHEET, OWNERSHIP, AND CAPITAL ALLOCATION:

Management kept the balance sheet clean with no debt until their recent acquisition in Sept 2018. Net debt is currently at a very manageable level of ~\$20M (< 1x EBITDA). The company also kept total shares outstanding steady at ~21M for several years. Growth has been funded with internally generated cash flow - Ituran generates ~\$30M in free cash flow per year.

I like the alignment of interests with management. The co-founders, Izzy Sheratzky and Yehuda Kahane, are the largest shareholders - collectively, insiders own ~19% of Ituran (Appendix 3). Management pays a modest dividend of \$5M (\$0.24 per share) per quarter or ~4% yield. Since its IPO in 2005, ITRN has distributed ~\$250M in dividends. The board has also authorized a share repurchase program of up to \$25M by 2020 - which I think is an attractive use of capital at the current valuation.

The optionality of BRINGG (Appendix 4) - As of Dec. 2018, Ituran owns 46% of a private company called BRINGG Delivery Technologies (BRINGG). BRINGG is a Tel Aviv-based delivery logistics technology platform for businesses. Clients utilize BRINGG's technology to streamline their logistical operations for peak efficiency and delivery experiences for their customers. BRINGG clients include Walmart ([Spark Delivery](#)), McDonalds, DoorDash, etc. As a key player in the global logistics market - which is predicted to grow to \$15.5T by 2023 - Ituran's ownership in BRINGG could be worth more than ITRN's current market cap over the next few years. Other notable investors in BRINGG include Next47, Salesforce Ventures, Siemens, Aleph VC, OG Ventures, Cambridge Capital, and Coca-Cola. Ituran has ownership interests in other private investments as well.

5. VALUATION:

Currently trading at a market cap of \$480M; -14x TTM PE and -7x TTM EBITDA. As mentioned above, the recent performance was negatively impacted by temporary issues that are somewhat behind us.

Overall, ITRN is an attractive business. I think this is a reasonable price for an asset-light, growing, recurring revenue business that generates high returns on incremental capital and a long runway for growth. Over the next several years, I expect ITRN to compound earnings in the high-teens CAGR as it executes on its growth plan in Latin America. Meanwhile, management is buying back shares and we continue to collect ~4% dividend yield.

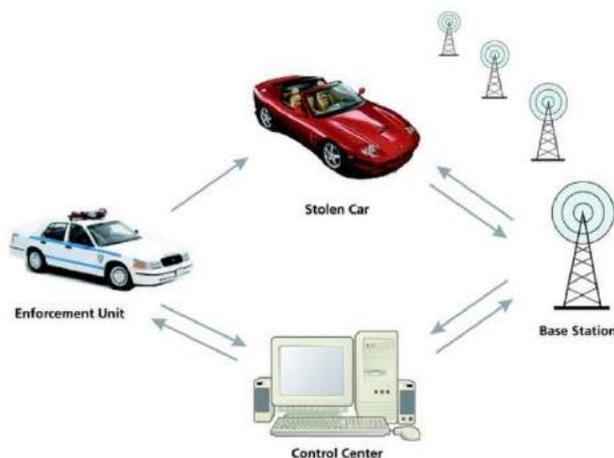
[See figure below]

ITRN (as of 12/10/2019)			2018	TTM	
Stock Price	\$	22.50	EV/Rev	1.9x	1.7x
TSO		21.1	EV/EBITDA	5.4x	6.6x
Market Cap		475.0	EV/EBIT	6.4x	8.6x
Cash		56.5	PE	9.4x	14.2x
Debt		74.5			
EV		493.1	Net Debt/EBITDA	0.2x	0.2x

Overall, ITRN is an attractive business. I think this is a reasonable price for an asset-light, growing, recurring revenue business that generates high returns on incremental capital and a long runway for growth. Over the next several years, I expect ITRN to compound earnings in the high-teens CAGR as it executes on its growth plan in Latin America. Meanwhile, management is buying back shares and we continue to collect ~4% dividend yield.

HOW DOES ITURAN'S SVR WORK?

Ituran's stolen vehicle recovery system (SVR) is based on three main components:



1. A telematics **end-unit** (the Product) is installed in medium- and high-end cars before or immediately after their initial sale.
2. Ituran has a **network of base stations** that relay information between the vehicle location units and the control center. The Company rents 96 base stations in Israel and 147 base stations in Brazil. These are mostly fixed costs.
3. Ituran maintains **control centers** that are operated 24 hours a day. These control centers use software to collect data from various base sites, conduct location calculations and transmit location data to various customers and law enforcement agencies. These are mostly fixed costs.

When there is a notification of an unauthorized entry or vehicle's theft from a subscriber, Ituran will pinpoint the location of the transmitter (in the car) with terrestrial network triangulation technology or GPRS technology. The Company's control center will then notify the relevant law enforcement agency of the location of the subscriber's vehicle and generally rely on local law enforcement or governmental agencies to recover the stolen vehicle. Some subtle differences by region but it is for this service, that the car owner will subscribe and pay to a modest monthly payment to Ituran.

WHY IN ISRAEL AND BRAZIL?

ISRAEL: Ituran started providing stolen vehicle recovery services at a time when [Israel was one of the top countries for private car theft](#) in the world. The combination of the growing number of cars/accidents (Appendix 1), the high tariff on auto parts, and the Oslo Accord are typically mentioned as key factors for the high rate of car theft in Israel. Car theft is still an issue in Israel - in most cases, local authorities do not recover stolen vehicles, and oftentimes, thieves will drive the vehicles into neighboring countries beyond the reach of local authorities. For example, a vehicle stolen in Tel Aviv will, within the hour, be taken to a "chop shop" in Palestinian areas, and taken apart to be sold for parts. To combat this issue, Israeli insurance companies encourage and, in some cases, require high-end car owners to subscribe to SVR services. Ituran delivered this SVR solution in Israel with an impressive recovery rate of 85%+ with an average vehicle recovery time of ~20 minutes.

BRAZIL, another key market for Ituran, also has high crime rates as well as a large uninsured population. Ituran's primary focus in Brazil is on car theft; however, the car theft dynamics are different in Brazil - thefts tend to be violent (i.e., hijacking at gunpoint) and there are large rainforests to hide stolen vehicles. An interesting point in Brazil is that customers sometimes stop paying their insurance premium and instead pay the monthly fee to Ituran because Ituran is cheaper. Here is a video about Ituran's business in Brazil.

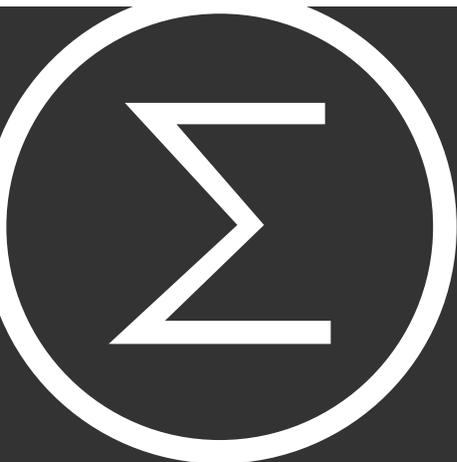
With a growing economy and a growing population, Brazil offers a large attractive market for Ituran. New vehicle registrations in Brazil averages 200K registrations per month (Appendix 2). Here is a good overview of the opportunities and challenges in the Brazil market - Brazil Car Theft and Insurance Report.

In addition to Brazil and Israel, the Company has a small but growing presence in Argentina, Mexico, Ecuador and Colombia. Most of these countries can offer future growth opportunities for Ituran.

ANNUAL MOTOR VEHICLE SALES:

Country	Indicator	Units	2005	2008	2009	2010	2015	2016	2017	2018
Mexico	All vehicles	Number	1,168,508	1,073,764	775,751	848,354	1,389,474	1,647,723	1,530,498	1,421,458
	Passenger Cars	Number	714,010	589,045	439,120	503,748	892,194	1,065,912	984,262	883,043
Brazil	All vehicles	Number	1,714,644	2,820,350	3,141,240	3,515,064	2,568,976	2,050,321	2,172,738	2,468,434
	Passenger Cars	Number	1,439,822	2,341,300	2,643,862	2,856,540	2,123,009	1,676,722	1,856,450	2,101,884
Argentina	All vehicles	Number	402,690	611,770	487,142	698,404	644,021	709,482	862,332	773,641
	Passenger Cars	Number	290,648	452,539	373,231	522,591	480,952	525,757	663,550	610,943
Israel	All vehicles	Number	156,000	192,000	174,500	217,000	260,200	292,700	286,472	271,497
	Passenger Cars	Number	130,000	170,000	160,000	200,000	247,300	276,900	271,134	257,465

Source: International Organization of Motor Vehicle Manufacturers



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Gary Mishuris

Chief Investment Officer at Silver Ring Value Partners Limited Partnership

RANKING: #10 LTM

BADGES:   

Owens Illinois Inc

RETURN TO DATE:

 28.83%

Asset: Equity

Symbol: OI

Idea Posted: 12/6/2019

Idea Updated: 12/20/2019

EXPECTED RETURN:

87.13%

 LONG

ATTACHMENTS



TIMEFRAME

1-2 Years

SITUATION

Deep Value

MARKET CAP

1.6B USD

Owens-Illinois (OI) is a deeply undervalued stable business with potential catalysts and activist involvement



About Gary Mishuris

Gary spent over 15 years as a professional value investor, starting his career at Fidelity Investments and most recently at Manulife Asset Management where he successfully launched and managed a concentrated intrinsic value strategy (US Focused Value). In 2016 he decided to strike out on his own and start my own firm, Silver Ring Value Partners, with the goal of achieving greater alignment with his LPs for a capacity-constrained strategy seeking to achieve safe compounding of capital over the long-term.



About Silver Ring Value Partners Limited Partnership

Silver Ring Value Partners utilizes a concentrated intrinsic value approach in seeking to safely compound capital over the long term. The portfolio is constructed using a fundamental bottom-up process that combines a focus on predictable businesses with demanding a large margin of safety based on the gap between price and value. Competitive Advantage is based on a combination of: Temperament, Micro-Economic Focus, Long-term Time Horizon and Ability to invest in the most inefficient parts of the market.

 Silver Ring Value Partners Limited Partnership is actively seeking capital on SumZero's Capital Introduction platform. To be connected, please reach out to capintro@sumzero.com



FINALIST SMALL CAPS



Ken Cavazzi

Chief Executive Officer at Infinitas Capital

BADGES:
5

Carrols Restaurant Group Inc

RETURN TO DATE:

▼ -1.33%

Asset: **Equity**

Symbol: **TAST:US**

Idea Posted: **12/16/2019**

Idea Updated: **12/21/2019**

EXPECTED RETURN:

49.70%

LONG

ATTACHMENTS



TIMEFRAME

1-2 Years

SITUATION

Value

MARKET CAP

346M USD

A short-term operational error has masked Carrols' fundamental strength and profitability and created an excellent buying opportunity



About Ken Cavazzi

Prior to founding Infinitas Capital LLC, Ken Cavazzi was a managing director and portfolio manager at Bear Stearn where he co-founded the Bear Stearn Focused Opportunities Fund. The Focused Opportunities Fund was a long/short equity hedge fund which specialized in small- and mid-cap equities within the United States. Before Bear Stearn, Mr. Cavazzi spent five years as an analyst at Artemis Advisors, a long/short hedge fund based in New York City. He earned his bachelor's degree in economics from the University of Rochester.



About Infinitas Capital

The Infinitas Capital Absolute Return (ICAR) strategy is a long/short equity strategy designed to capture most or all of the market's return in a bull market, protect capital during corrections, and generate positive returns in a bear market. Long/short and gross/net exposures are determined by the opportunity set, conviction levels, and market trend. ICAR invests in a moderately concentrated portfolio of primarily U.S. equities utilizing a bottom-up research-intensive investment process with an overlay of top-down considerations. The strategy has a five-category investment approach to diversify style bias and factor risk: Cyclical, Franchise, Growth, Special Situations, and Turnarounds. The ICAR strategy seeks outstanding risk-reward scenarios in companies that are financially transparent, researchable, and have shareholder-value-driven management teams. The strategy focuses on industrial, consumer, and information technology companies.

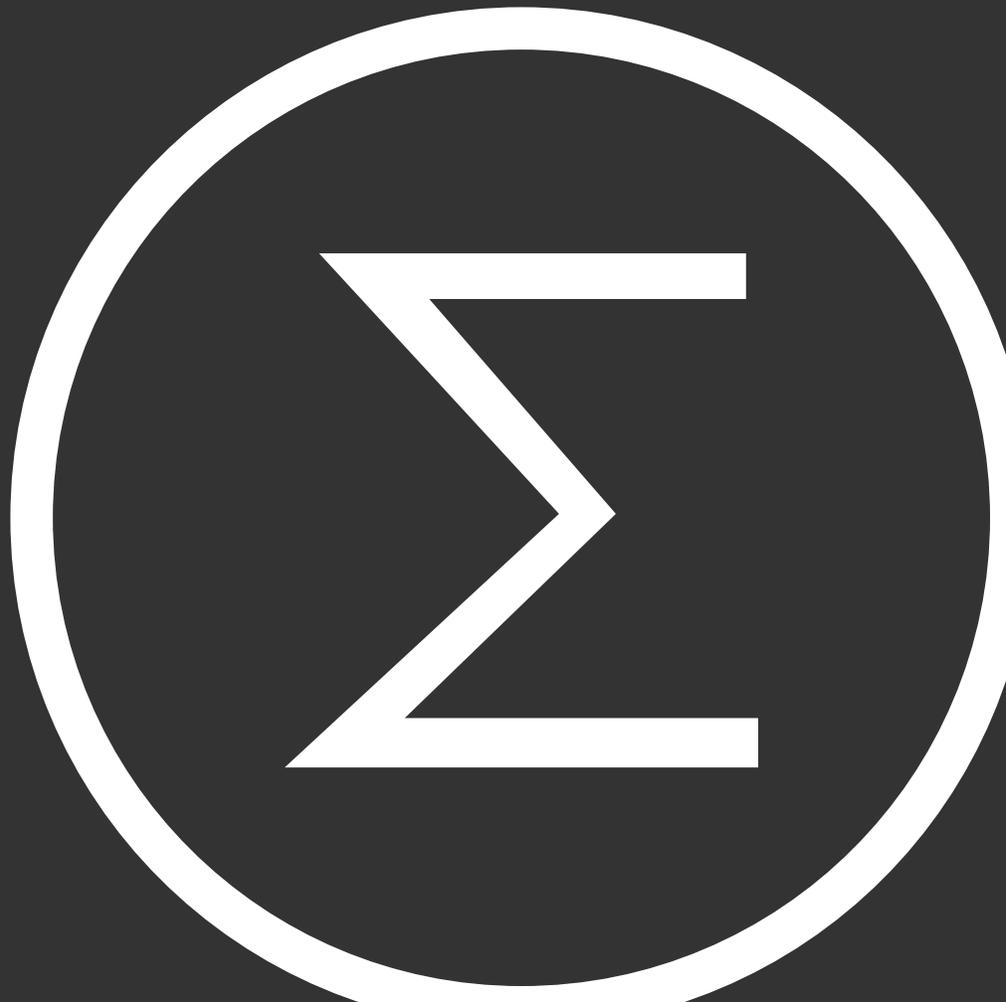


Infinitas Capital is actively seeking capital on SumZero's Capital Introduction platform. To be connected, please reach out to capintro@sumzero.com.



MID CAPS

Ideas on companies whose respective market capitalizations were between US\$2B and US\$10B at the time of submission.





WINNER MID CAPS



Ben Axler

Chief Investment Officer at Spruce Point Capital Management

BADGES:



💡 Canadian Tire Corp Ltd Com

Asset: **Equity**

Symbol: **CTC:CN**

Idea Posted: **12/6/2019**

Idea Updated: **12/9/2019**

RETURN TO DATE:

▲ **9.7%**

EXPECTED RETURN:

49.16%



SHORT

ATTACHMENTS



TIMEFRAME

1-2 Years

SITUATION

Other

MARKET CAP

8.7B CAD

Structurally Non-Competitive Brick And Mortar Retailer In Canada With A Stretched Balance Sheet That Will Be Forced To Deleverage Or Face Credit Downgrades



About Ben Axler

Mr. Axler is the founder of Spruce Point Capital Management and co-founded Prescience Point Research Group (2012-2014), a short-focused research firm. Mr. Axler is an activist short-seller, forensic financial researcher, and has exposed billions of dollars of financial schemes globally. Prior to founding his company in 2009, Mr. Axler spent eight years as an investment banker with Credit Suisse and Barclays Capital where he structured and executed financing, derivative risk management, and M&A deals for leading Fortune 500 clients. Mr. Axler's work has been widely recognized in the financial industry for its originality and track record of performance



About Spruce Point Capital Management

Spruce Point Capital Management, LLC is a New York based investment manager founded in 2009. The firm focuses on short-selling, value, and special situation investment opportunities. The firm conducts in depth fundamental research and takes an activist approach to investing

Canadian Tire Corp Ltd Com

Asset Class: **Equity** Symbol: **CTC:CN** Updated: **12/9/2019** Submitted: **12/6/2019**

Pricing & Return Details		↓ SHORT
EXPECTED RETURN		49.16%
TARGET PRICE		90.00 CAD
INITIAL PRICE		195.99 CAD



BY:
Ben Axler

CURRENTLY AT:
Spruce Point Capital Management

Structurally Non-Competitive Brick And Mortar Retailer In Canada
With A Stretched Balance Sheet That Will Be Forced To Deleverage Or
Face Credit Downgrades



ASSET CLASS:
Equity



SITUATION:
Other



TARGET ALLOCATION:
1%-1.5%



CATALYSTS:
Management Change
and 2 more



TIMEFRAME:
1-2 Years

INVESTMENT THESIS

SUMMARY

- Canadian Tire (CTC) is a brick-and-mortar retailer in Canada that has been slow to move sales online, or develop a flourishing mobile app. The market underappreciates Amazon's growing market share.
- With revenue growth slowing and debt rising, we believe CTC is making poor choices to increase capital returns to shareholders, instead of focusing on deleveraging and avoiding a credit downgrade.
- Risky credit card extension magnifies the problem while multiple symptoms emerge, including aggressive accounting changes, assets sales and stretched acquisitions. Cost cutting programs are nebulous, too little and too late.
- Bay Street analysts see just 11% upside assuming all goes well, but ignore the growing risks, and fail to capture all the explicit and implicit debt obligations. We see intermediate term risk of 30-50% downside, and a terminal 100% downside if sales continue to vanish, a sustain economic correction occurs, cash flow contracts, and debt remains unaddressed.

Report Entitled: "Kicking The Tire Down The Road"

Spruce Point is pleased to issue a unique investment research opinion on Canadian Tire Corp. ("CTC" tickers: [OTCPK:CDNAF](#) / [CDNTE](#) , "the Company"), a Canadian retailer. The report outlines why we believe shares face 30% - 50% downside risk to approximately C\$77 to C\$100 per share. Please read our disclaimer below.

Spruce Point believes that Canadian Tire is a challenged brick-and-mortar retailer perceived as a dependable mid-single-digit grower on an increasingly precarious foundation of unsustainable debt and recent financial results dependent on aggressive accounting practices. We also believe the market has failed to realize multiple signals of financial stress.

MATURE BUSINESS WITH GROWING SIGNS OF STRAIN:

While Canadian Tire appears to participate in nearly every retail category, Canada's retail environment continues to become increasingly competitive as U.S. retailers ([AMZN](#) [LOW](#) [HD](#) [COST](#) [WMT](#)) expand in the market and offer lower cost, and free, shipping options. Our research shows CTC is not price competitive and is often located in close proximity, or sometimes in the same shopping center as, competitors. Canadian Tire store count continues to decline while competitors grow their footprints. The market is blissfully ignorant to the Amazon [AMZN](#) displacement effect that our data shows is accelerating. On CTC's most recent earnings call, management announced a new cost reduction effort. We believe this program is too little and too late and it cannot forestall CTC's inevitable decline. Our analysis illustrates that, based on the Company's current and projected financial situation, CTC may struggle to meet its capital return promises.

- CTC's retail footprint consists of Canadian Tire, Mark's and FGL Sports banner stores with products ranging from automotive, tools & hardware, home goods and sports & recreation
- While SSS (same store sales) have grown modestly, we believe a significant part of the growth is not sustainable due to the declining number of stores and a rapidly saturated market
 - CTC's has no competitive advantage and often leaves customers "frazzled-looking" due to the vast stores and cluttered aisles

- The 4 P's of marketing suggest that CTC is at a clear disadvantage in the retail market:
- Product: Diverse assortment with no clear focus, sweet spot is mostly lower quality, mass market products (low ticket items of ~\$50)
- Price: Not price competitive, products are often marked down on "flyer" sales, least competitive shipping fees vs. peers (no free shipping) and offering free shipping will destroy already contracting margins
- Place: Brick and mortar business model with stores often located in close proximity, or sometimes in the same shopping center as, competitors including Walmart, Costco, Home Depot and Lowe's. Major U.S. retailers continue to expand in Canada and gain market share. As Canadian e-commerce continues to grow, and mobile adoption increases, CTC's business lags peers.
- Promotion: Promotes through "old-fashion" flyers, credit card promotions and Canadian Tire Money. Weak social media presence
- Canadian Tire Gas+ is experiencing margin pressure due to increased competition in the market – we anticipate this to continue due to the ~9% discount Costco Gas offers its customers
- Website traffic and mobile app data suggest CTC is struggling relative to its peers. Website visitors are 25x more likely to visit amazon.ca and mobile app users who use Amazon's app too has increased from 50% to 75% over the last 2 years
- Amazon's Showroom: CTC has one of the lowest conversion rate for customers who made a purchase vs. people who visit its stores
 - E-commerce lags peers and CTC cannot match the level of investment in technology as its competitors
- Don't Bet On Botched Acquisitions Saving CTC:
 - Helly Hansen, acquired in Q3'19, continues to underperform expectations and we believe is losing market share outside of Canadian Tire banner stores.

Yet, we believe management has led analysts to believe the deal is a raging success

- We believe the acquisition of Party City Canada will be a larger failure than Helly Hansen – Party City continues to struggle in the U.S. (PARTY shares are down 70% since November 7th, 2019) and we see no reason its Canadian business will not suffer a similar fate

RISK OF CREDIT DOWNGRADE DUE TO OVER-LEVERAGED AND MISUNDERSTOOD BALANCE SHEET:

Multiple rating agencies have warned of a credit downgrade if leverage is not reduced. Our analysis supports the view it will be nearly impossible to delever while maintaining current levels of dividends and share repurchases without selling assets that could reduce earnings. Current leverage of ~3.5x is significantly above rating agency guidance of 2x needed to prevent a downgrade and requires debt reduction of ~C\$1,600m, but has no free cash flow after promised dividends and buybacks.

RISKY CREDIT CARD BUSINESS WITH RAPIDLY DETERIORATING CREDIT CARD PORTFOLIO:

CTC Triangle Rewards Program has been an effort to boost retail sales and drive store traffic at the expense of higher risk lending practices. 68% of recent loan growth has come

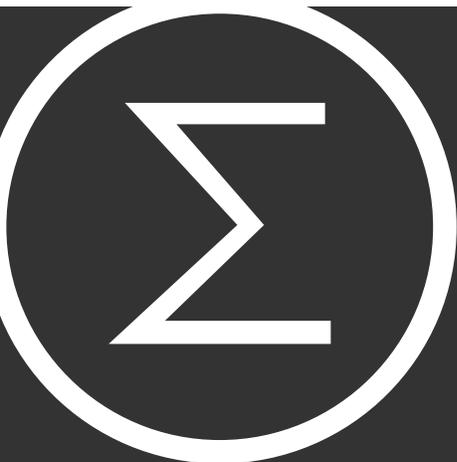
from moderate and high-risk customer classifications. Net charge-offs for “seasoned” loans, a leading indicator for an increase in future credit losses as loans begin to mature, is at historic highs despite the majority of high-risk growth over the past 12 months. Relative to other Canadian banks, CTC Bank delinquencies have performed worse over the past 2 years.

Aggressive Accounting Practices Are Potentially Misleading Investors By Masking Poor Organic Earnings Growth:

CEO Stephen Wetmore has commented on earnings calls about the importance of hitting numbers. Various one-time benefits including altered expected credit losses by modifying model assumptions, changed estimates affecting the present value of loss recoveries, and changes in its depreciation method, have helped CTC hit its 10% EPS growth target.

Despite these clear risks, the sell-side has only one sell recommendation on CTC and sees only 11% upside to C\$167 in the next 12 months. We believe that investors will be surprised and disappointed by the risk to capital return plans and the poor underlying earnings growth of the business. Spruce Point sees 35% - 50% downside risk in CTC shares when each of these factors is considered.

Thank you for your interest in our research and happy holidays.



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FINALIST

MID CAPS



Gokul Raj

Portfolio Manager at Bavaria Industries Group

RANKING: #17 All-Time

BADGES:
116 184

💡 Grupo Catalana Occidente Sa Ord

RETURN TO DATE:

▼ -2.64%

Asset: Equity

Symbol: GCO:SM

Idea Posted: 12/16/2019

Idea Updated: 12/19/2019

EXPECTED RETURN:

27.80%

LONG

ATTACHMENTS



TIMEFRAME

2-5 Years

SITUATION

Growth At Reasonable Price

MARKET CAP

3.74B EUR

GCO is a well run family owned insurance business (65% ownership) with strong competitive moats and it can compound value at 10%+ rates and is available at book value & < 10X earnings !!



About Gokul Raj

Gokul is a multi-dimensional value investor with a special focus on compounders and spin-offs. He currently work as a portfolio manager with a listed Investment holding firm and help it allocate its permanent capital (balance sheet cash) in long-term public equity investments. He has completed my Masters in Finance from London Business School. His investment experience is primarily in Indian small and mid-cap ideas.



About Bavaria Industries Group

BAVARIA Industries Group AG is a family holding company that holds majority interests in companies showing clear potential for improvement or facing new challenges. Using our BAVARIA operating system helps the companies to identify potential cost reductions and performance enhancements and support the implementation of the measures considered necessary.



FINALIST

MID CAPS



Kyle Pinkerton

Analyst at Kennebec River Capital

BADGES:



💡 Amn Healthcare Services Inc Com

RETURN TO DATE:

▲ 5.47%

Asset: Equity

Symbol: AMN:US

Idea Posted: 12/13/2019

Idea Updated: 12/18/2019

EXPECTED RETURN:

52.78%

↑ LONG

ATTACHMENTS



TIMEFRAME

1-2 Years

SITUATION

Value

MARKET CAP

2.9B USD

A niche staffing company with specific tailwinds making it more resilient than peers, with growth option related to health care technology investments

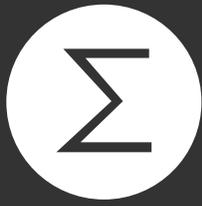


About Kyle Pinkerton

Kyle Pinkerton is an Assistant Portfolio Manager at KRC, supporting the fund through research functions as well as other operational responsibilities, and assisting in portfolio management decision-making. He also serves as a Senior Analyst at Valens Research.

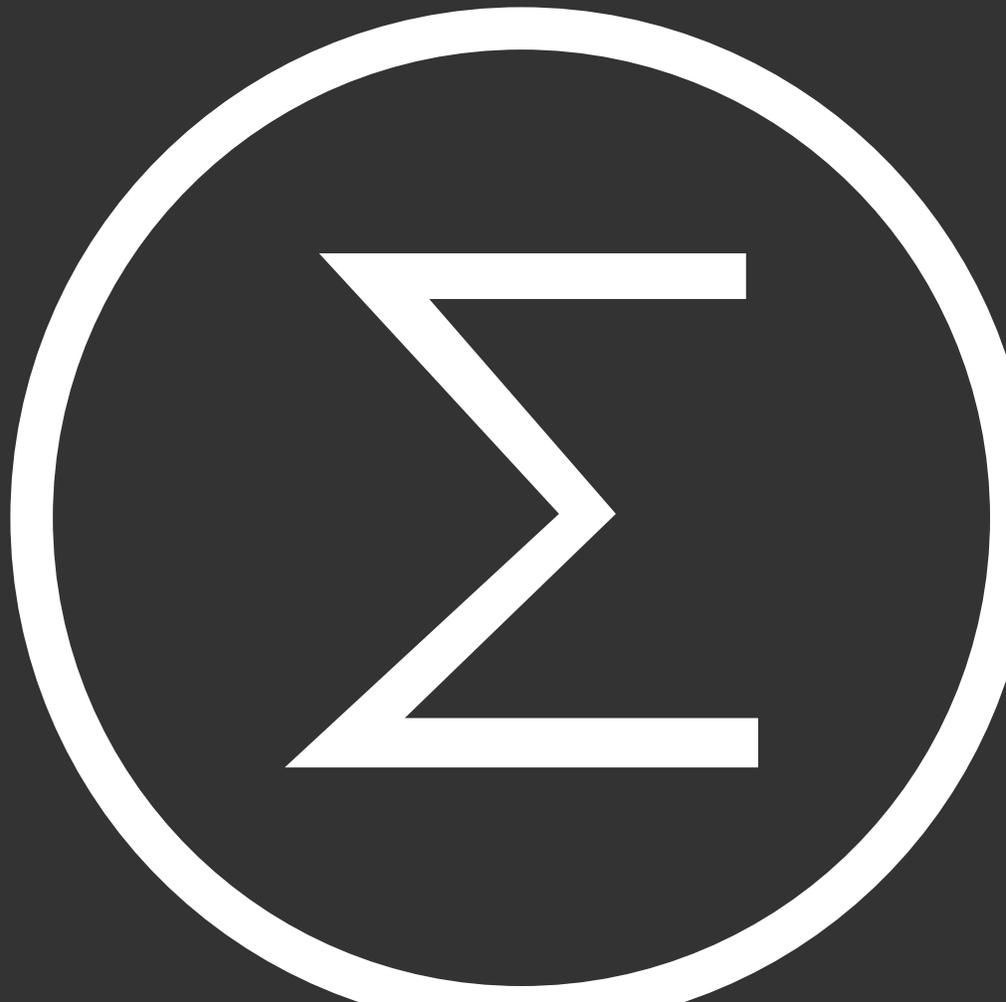


Kennebec River Capital is actively seeking capital on SumZero's Capital Introduction platform. To be connected, please reach out to capintro@sumzero.com.



LARGE CAPS

Ideas on companies whose respective market capitalizations were US\$10B or greater at the time of submission.





WINNER LARGE CAPS



Joseph Frankenfield

Portfolio Manager at Saga Partners LLC

RANKING: #43 All-Time

BADGES:
6 2 18

Carvana Co Cl a

Asset: Equity

Symbol: CVNA:US

Idea Posted: 12/16/2019

Idea Updated: 12/21/2019

RETURN TO DATE:

-8.84%

EXPECTED RETURN:

131.03%

LONG

ATTACHMENTS



TIMEFRAME

2-5 Years

SITUATION

Growth

MARKET CAP

14B USD

E-commerce used car dealer disrupting the industry. Platform offers better customer experience, selection, and value. Significant growth as it scales and builds its competitive advantage.



About Joseph Frankenfield

Co-portfolio manager at Saga Partners, LLC, an investment firm that manages separate accounts for clients. Saga Partners manages a fundamental, long-only equity portfolio with the goal of providing net returns above the general market over the long-term. The best way to learn more about the Saga Portfolio is to read the investor letters on Saga Partner's SumZero page or visit www.sagapartners.com.



About Saga Partners LLC

We are fundamental, long-term, value investors. The actively managed Saga Portfolio is expected to long-term provide returns materially above the general market over the long-term by taking concentrated positions in our highest conviction ideas (-10 positions).



Saga Partners LLC is actively seeking capital on SumZero's Capital Introduction platform. To be connected, please reach out to capintro@sumzero.com.

Carvana Co Cl a

Asset Class: **Equity**

Symbol: **CVNA:US**

Updated: **12/21/2019**

Submitted: **12/16/2019**

Pricing & Return Details

↑ LONG

EXPECTED RETURN	131.03%
TARGET PRICE	200.00 USD
INITIAL PRICE	94.96 USD



BY:

Joseph Frankenfield

CURRENTLY AT:

Saga Partners LLC

E-commerce used car dealer disrupting the industry. Platform offers better customer experience, selection, and value. Significant growth as it scales and builds its competitive advantage.



ASSET CLASS:
Equity



SITUATION:
Growth



TARGET ALLOCATION:
2% - 5%



CATALYSTS:
N/A



TIMEFRAME:
2-5 Years

INVESTMENT THESIS

INVESTMENT THESIS

- U.S. used car industry is very large, highly fragmented, and due for disruption.
- Carvana created a vertically integrated, online platform for buying and selling cars that provides a more seamless customer experience, vast vehicle selection, and lower prices.
- Founder-led CEO with significant inside ownership.
- As Carvana builds its scale advantages, the self-reinforcing flywheel will continue to build, helping grow its inventory selection, logistics & transportation network, and data analytics.
- Current trends show Carvana gaining significant market

share at a fast rate. Once volumes and operating margins reach scale and assuming reasonable market share, current valuation looks very attractive based on cash flow potential.

COMPANY BACKGROUND

Carvana is disrupting the used car industry through its online platform to buy and sell cars. By offering a better overall customer experience, wider vehicle selection, and lower prices, Carvana has grown volumes at a fast rate, improve gross profit per unit, and scale fixed costs. As Carvana establishes itself as the dominant e-commerce used automobile dealer, it is reasonable to expect them to gain significant market share in the highly fragment market and earn attractive economic profits.

The Company was started in 2013 with its first market in Atlanta, Georgia, and has since grown to 146 markets, reaching 66% of the U.S. population, and is expected to sell ~175,000 retail units in 2019. It has become known for its car vending machines and last mile delivery of a purchased car to a customers' home. Since launching just only seven years ago, Carvana has disrupted the used car industry and has quickly grown, expecting to generate over \$4 billion in 2019 sales.

USED CAR INDUSTRY

The U.S. automotive industry is very large, generating ~\$1.2 trillion in sales during 2018, making up roughly 20% of the U.S. retail economy. According Edmunds Used Vehicle Market report, there were \$764 billion in 2017 used cars sales. Despite this large market, it is a highly fragmented space, with over 43,000 used car dealerships and nearly 18,000 franchise dealerships. The 100 largest dealerships make up only ~7% of the total market. CarMax is the largest used car dealer with just under 2% market share. Carvana is expected to sell 175,000 used cars in 2019, making it the fourth largest used car dealer.

Company	2018 Used Retail Units Sold	Market Share
Carmax	721,512	1.8%
Penske	282,542	0.7%
Auto Nation	237,722	0.6%
Lithia Motors	151,234	0.4%
Group 1 Automotive	111,806	0.3%
Sonic Automotive	139,605	0.4%
Carvana	94,108	0.2%
Asbury Automotive Group, Inc.	82,377	0.2%
Total 2018 U.S. Used Vehicles Sol	39,500,000	

Source: Saga Partners, Company filings

Cox Automotive estimated 2018 U.S. market to reach 39.5 million used vehicle transactions.

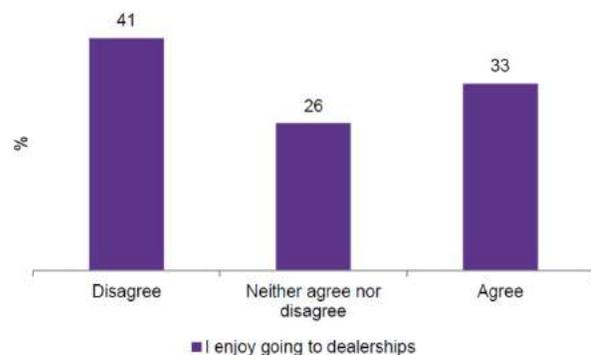
Nearly 30 million used vehicles sold during 2017 (~70%) are sold through car dealerships while 12 million (~30%) are sold in private party transactions. Of the ~41 million used cars sold, ~22 million were estimated to be less than 10 year old vehicles.

	Used U.S. Vehicle Retail Units By Year		
	2015	2016	2017
New Car Dealers	14,647,535	14,968,206	15,107,834
Used Car Dealers	13,319,015	13,892,922	14,106,537
Private Party Sales	11,476,307	11,694,366	12,168,616
Total	39,442,857	40,555,494	41,382,987

Source: National Automobile Dealers Association

The traditional brick & mortar used car dealership model has been due for disruption. The majority of consumers have negative views towards used car dealerships. Buying a car is an infrequent and significant purchase for the average customer. Since the used car dealer industry is highly fragmented, customers may not be familiar with the local dealership they go to. There may be uncertainty surrounding the quality of the used car, the fair price, it's not uncommon for haggling over different parts of the transaction, and the whole process could take several hours of time spent at the dealership completing the transaction.

According to Mintel Group's June 2019 consumer survey of 1,100 prospective car buyers, over 40% do not enjoy going to dealerships.



Source: Lightspeed/Mintel

50% of consumers distrust car salespeople.

47% of consumers dislike negotiating/haggling when buying a vehicle.

Buyers are least satisfied with how long the purchasing process took at a used car dealership and interactions

with the financing department was the second worst category. According to the survey, buyers spend nearly 40 minutes on average idle at the dealership, largely during the financing/paperwork process.

Additionally, most dealerships only hold about 50-200 cars on their lot therefore finding the right used car may be difficult at any single location. Nearly half of prospective used car customers expect to visit multiple dealerships to find the car they are looking for.

CARVANA'S SOLUTION

Ernie Garcia III, the founder and CEO of Carvana, sought to fix the used car buying experience by removing the pain points. The traditional retail model provided an undifferentiated buying experience between dealerships.

A fragmented market makes it difficult for any single dealer to achieve scale partially reflecting the high variable cost structure of the business and low barriers to entry into the industry. Most dealers acquire vehicles and fulfill sales the same way. Labor and cost structure of the sales manager, finance manager, and other head count is similar across dealerships. Reliance on third party lending adds incremental frictional costs and limits the dealer's ability to participate in the gross profit created through financing. Additionally the value proposition customers receive at traditional dealership is often clouded during the multiple steps that often occur within an automobile purchase that often requires haggling/negotiating with a salesperson.

Ernie believed it was possible to provide a better car buying experience by building a vertically integrated used vehicle supply chain supported by software and data. What were variable costs in the traditional model, i.e. vast vehicle selection, providing extensive product information, personalized recommendations, and other sales support costs, largely shift to fixed costs in an e-commerce software driven model which shrink rapidly as a percent of sales as volumes grow. Additionally, costs that remain variable with an e-commerce model such as transportation/fulfillment,

sourcing vehicle inventory, inspection & reconditioning vehicles, significantly improve with scale and the help of technology/data management.

Ernie focused on 1. Improving the entire customer experience, 2. Offering a wide selection, 3. Providing better value.

1. CUSTOMER EXPERIENCE

There are many different parts of the used car sale that dealerships must get right to provide a smooth customer experience. It is very difficult to provide a seamless process if different parties control different parts of the operation such as vehicle sourcing, reconditioning, pricing, sales, financing, trading, or delivery. Carvana wanted to integrate the entire customer-facing aspect of their business to make it seamless, transparent, and self-service, which would drive higher adoption. Carvana's motto is "they sell cars, but they're not car salesmen."

- Customers can buy a car in under 10 minutes, have it delivered to their door for free, and have a 7-day test own period where Carvana will pick up the car for free within 7 days if the customer decides to return the car.
- 360-degree photography of each vehicle gives a potential customer enough confidence in the quality of the vehicle in a self-service way that doesn't require a used car salesperson or a trip to the dealership.
- Vehicle trade-in experience is simple, asking for limited information, no photography, no physical inspection, and vehicle pick up.
- Vending machines provide a unique fulfillment option for consumers and are a key part of Carvana's growth strategy. In addition to reducing their variable fulfillment costs, vending machines offer customers a fun experience to pick up their purchased vehicle while simultaneously creating branding and marketing.

- Integrated lending provides a better customer experience, fewer frictional costs in time, information, and Carvana can share in the gross profit economics. Over 70% of people finance their vehicle through Carvana because it is seamlessly integrated into the customer experience.

2. WIDE SELECTION

Based on a survey of people that visited Carvana’s website and did not purchase from Carvana but from a dealership afterwards, the number one answer for not buying from Carvana was “they did not find the car they were looking for.” This suggests that the reason people do not buy on Carvana is not the online buying platform, financing terms, trade in value, etc. but the selection. Therefore, as Carvana expands its inventory selection, they should get a lot more customer conversion.

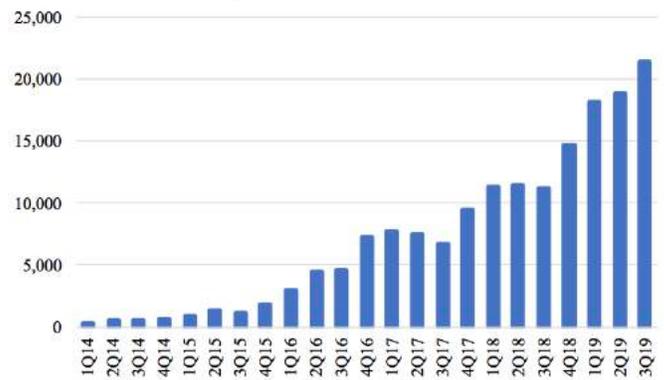


Source: Investor Presentation

Physical dealerships are restricted to the inventory on their lot. If a dealer has multiple locations within a geographic region, they still need to keep the most popular items in stock at each location in a very redundant way.

Carvana has a pooled national inventory that now has nearly 25,000 cars available to purchase on its website compared to less than 200 on a traditional dealer lot and ~15,000 total dealer vehicles available for sale in the average regional market. In other words, Carvana has nearly twice the selection available than an entire region’s dealer inventory. In order to provide the nationwide inventory to customers, Carvana has built the internal hub and spoke logistics network and software system to be able to quickly and economically transport cars directly to the customer when they want it.

Inventory Units Available on Website



Source: Company filings

3. BETTER VALUE

By shifting much of the dealership’s variable costs to fixed, Carvana’s cost structure has much more attractive unit economics compared to the traditional used car dealer. Combined with integrating the lending inhouse so Carvana can share in financing gross profits, they are typically able to sell vehicles that are \$1,000 – \$1,500 below Kelley Blue Book’s Suggested Retail Value or prices at comparable cars at other dealerships. They are also able to offer more money on vehicle trade-ins and still earn attractive gross profits per unit. Of course when scaling to a nationwide online used automotive dealer, there are significant capital investments required and large fixed costs which incur operating losses until volumes reach scale, however the unit economics for each automobile sold are very attractive (see Managements Core Objects and Unit Economics section below).

It does not take long for prospective customers to discover they are able to buy the same type of car on Carvana for a lower price that can get delivered directly to their home with seamless and transparent financing.

MANAGEMENTS CORE OBJECTIVES

The key difference between an online e-commerce company like Carvana and the traditional brick and mortar used car dealership are between the variable and fixed costs of selling each incremental vehicle. Carvana’s total fixed costs

are significant relative to the average dealership although the fixed costs are relatively stable, and as Carvana scales, fixed costs become a smaller percent of total sales. The average dealership has difficulty scaling because of their high variable cost structure providing few economies of scale and some diseconomies of scale when considering the loss of entrepreneurial drive when dealerships are no longer owner operated.

Below is a chart of the six publicly trade automotive dealership operating margins. It's a little difficult to compare Carvana to the publicly traded automobile dealers without breaking out the operating segments within each dealership because the average dealership has four profit centers, new car sales, used car sales, parts & services, and other ancillary products such as warranties & insurance. Each segment has different margins with new car sales providing very little gross margin (-4%), used cars providing some gross margin (-6-7%), and selling parts, services, and ancillary products providing very high margins. Carvana only sells used vehicles and financing/ancillary products.

Overall, as Carvana scales it expects total fixed costs to decline as a percent of sales providing more attractive operating margins in the long term despite not offering higher margin parts & services.

[See figure below]

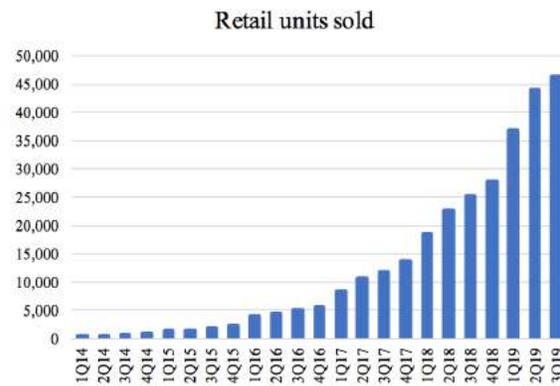
Carvana loses money at its current volume of business. For the company to be successful it must continue to scale in order to benefit from its high operating leverage. Management outlined their "vision" and goals in the very first public quarterly letter to shareholders.

Their core objectives are to:

1. Grow Retail Units and Revenue
2. Increase total gross profit per unit
3. Demonstrate operating leverage

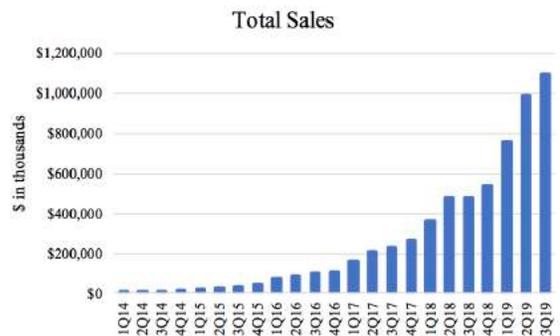
Grow retail units and revenue

Overall total growth in retail units and revenue look very favorable. Retail units grew 113% in 2018 and are expected to grow 86% in 2019.



Source: Company filings

Total revenue grew 131% in 2018 and is expected to grow 100% in 2019 to over \$4 billion.



Source: Company filings

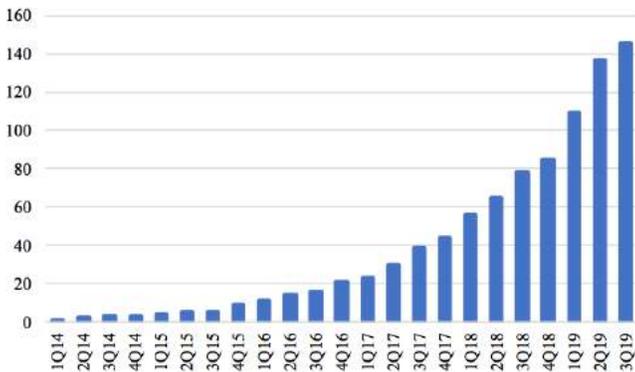
	Margins	3Q19 Carvana	Carvana LT Target	Penske	Auto Nation	Lithia Motors	Group 1 Auto	Sonic Automotive	Asbury Auto Group
Sales		100%	100%	100%	100%	100%	100%	100%	100%
Variable Costs	COGS	87%	81%-85%	85%	85%	86%	86%	86%	84%
	GPM	13%	15-19%	15%	15%	14%	14%	14%	16%
Fixed Costs	SG&A	19%	6-8%	12%	12%	11%	11%	12%	11%
	EBIT	-6%	7.5%-12.5%	3%	3%	2%	4%	2%	5%

Source: Saga Partners, Company filings

Carvana launched 22 new markets in the first three quarters of 2019 providing a total of 146 at the end of the third quarter. They do not expect to open any new markets during 4Q19 in order to focus on operational efforts and prepare the business for further growth in 2020.

In the brick and mortar used car dealership model, launching a new market requires constructing a new dealership in that market and building a local inventory to fill the dealership lot. In the e-commerce model, launching a new market requires connecting the market to an existing inventory pool through a logistics network. This means new markets can be added by setting up an office, small support staff, a few single car haulers, initial marketing costs for an average cost of ~\$500,000 vs. \$10-\$20 million for a traditional dealership.

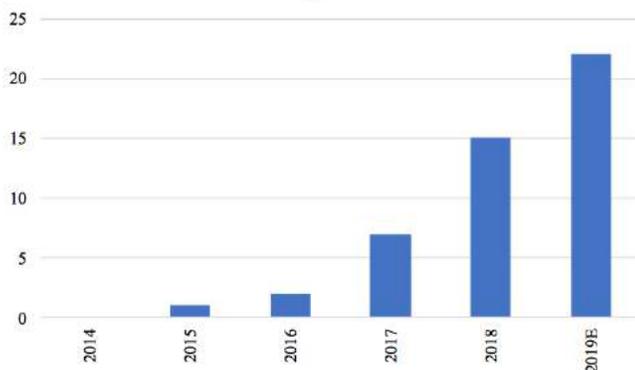
Number of markets



Source: Company filings

Markets with vending machines see a significant boost in market share gains and cost an average of \$5 million for a new location.

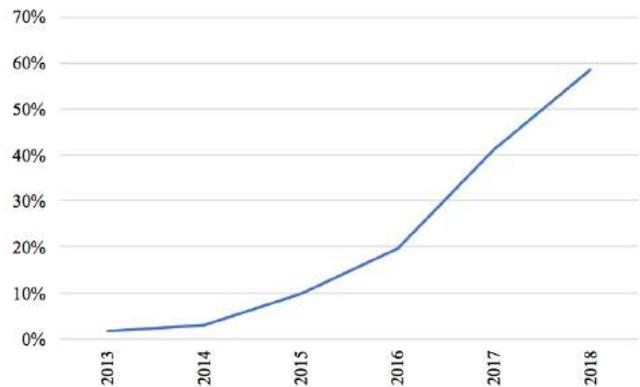
Vending Machines



Source: Company filings

Carvana estimates they can now reach ~67% of the total U.S. population based on their current markets, up from 59% at the end of 2018. Management believes they can eventually serve 90%+ of the U.S. population in their markets over time and serve another 5% in smaller cities through delivery of nearby markets, ultimately bringing the total share of the population they serve to 95%.

Total U.S. Population Coverage



Source: Company filings

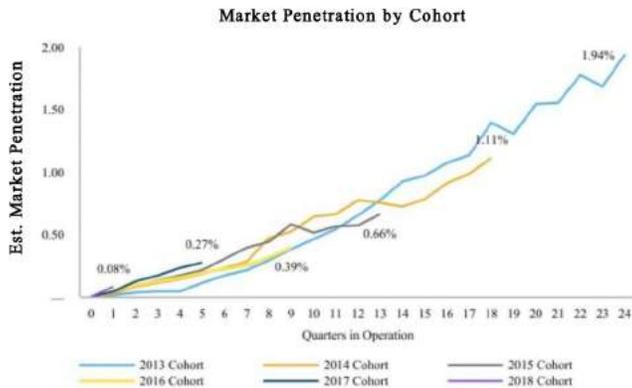
Part of Carvana's hub and spoke transportation/logistics network are internal & recondition centers (IRCs). After Carvana acquires a vehicle, they transport it to an IRC where it undergoes the 150-point inspection and reconditioning process and then is stored there as part of the nationally available inventory. A vehicle will remain at the IRC until it is purchased at which point it will be delivered to a local market hub and finally delivered to the customer.

IRCs deliver economies of scale that are essential to the Carvana operating model and achieving their long-term margin goals. New IRCs create benefits in sales volumes and logistics expenses in nearby markets. After opening a new IRC, markets closest to it see an average logistics expense per unit typically fall 20% and sales grow more than twice as fast as comparable markets.

Carvana will complete their 8th IRC at the beginning of 2020, providing Carvana the ability to inspect & recondition ~400K vehicles at full capacity. They have five more sites where they expect to launch four-line facilities in the near future.

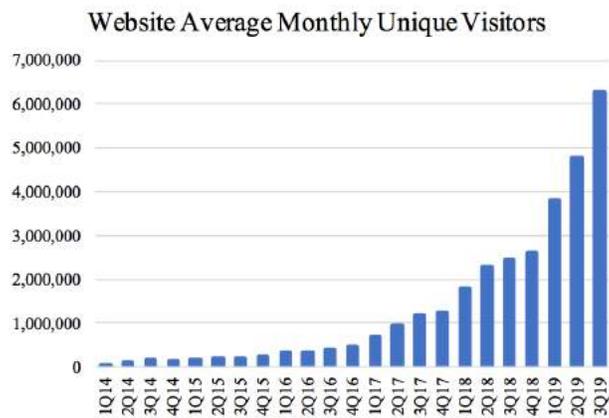
Beyond opening new markets, Carvana will grow from increasing market penetration. As market share increases within a region, expense per unit declines. The chart below aligns performance of all markets in a cohort with their first quarter of operation and includes data in quarters where all markets in a cohort were active.

The 2013 cohort only consists of Atlanta, Georgia, the first market, and the 2014 cohort is comprised of Nashville and Charlotte.



Source: Company Annual Report

Traffic to the website follows similarly strong trends as Carvana moves into new markets.

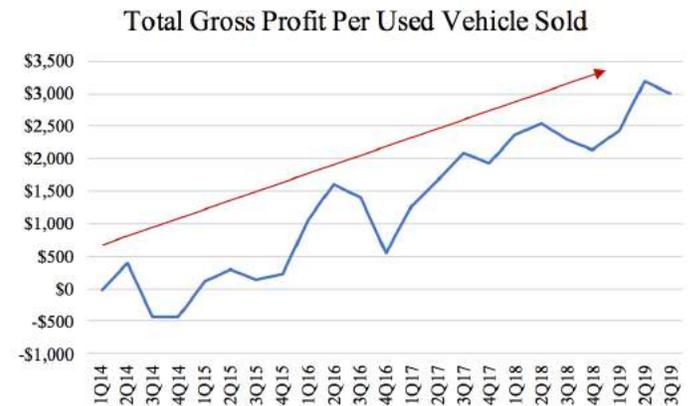


Source: Company filings

2. INCREASE TOTAL GROSS PROFIT PER UNIT

While the highest priority during Carvana's growth phase is generating demand and building infrastructure

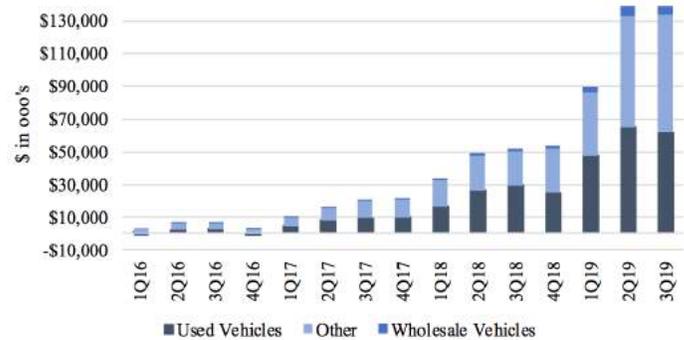
to support growth in retail units, their next priority is increasing gross profit per unit (GPU).



Source: Company filings

Gross profit consists of used vehicles, wholesale vehicles, and other ancillary products largely consisting of financing customer purchases.

Total Gross Profit By Segment



Source: Company filings

Carvana is able to grow gross profit per unit by:

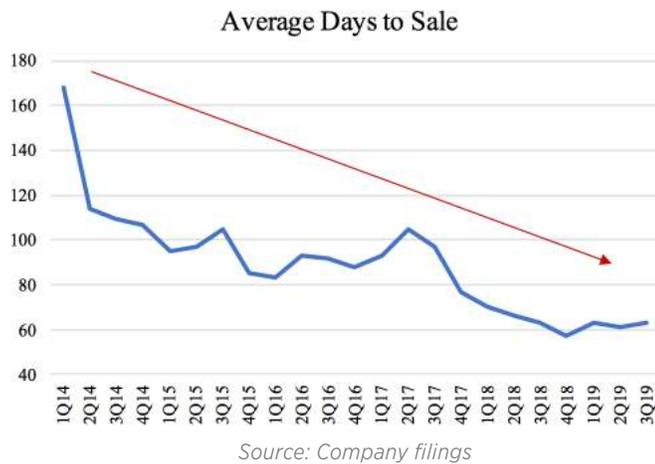
1. Selling vehicles for higher prices
2. Lowering COGS per unit
3. Selling other products services (Carvana Automotive Finance, vehicle service contracts, and GAP coverage)

1. SELLING VEHICLES FOR HIGHER PRICES.

Carvana can improve sales prices by lowering average days to sale, i.e. improving inventory turnover. The average used car price declines by ~18% per year, or ~\$10 per day on a \$20,000 vehicle. This reduction in price over time is incorporated into Carvana's vehicle pricing.

Reductions in used vehicle prices over time means that average days to sale impacts the average selling price of vehicles, average days to sale depends on the number of vehicles they hold in inventory and the number of customers Carvana attracts to purchase those vehicles. Decreasing the average number of days between vehicle acquisition and sale to customer lowers the depreciation cost of the vehicle over time and increases benefits from economies of scale due to their centralized online sales model.

Over time Carvana's goal is to increase the number of markets and sales growth faster than their inventory size which will decrease average days to sale as demand increases relative to supply.

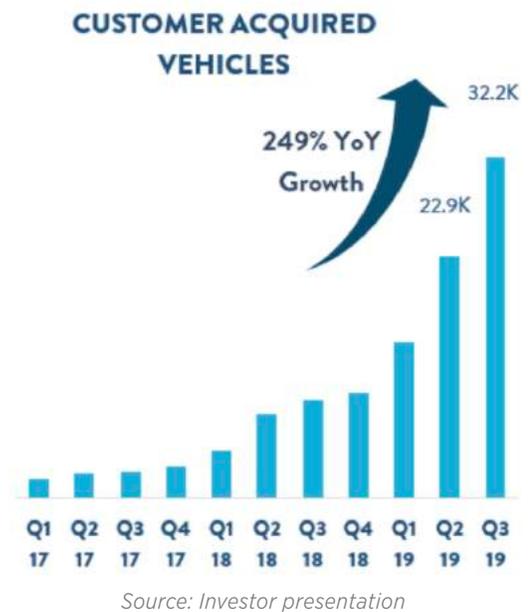


2. LOWERING COGS PER UNIT

COGS consist of the costs to acquire the vehicle, reconditioning the vehicle, transportation costs with preparing the vehicle for resale, depreciation, and IRC overhead. While COGS is largely a variable cost, Carvana can improve COGS by lowering vehicle acquisition costs by purchasing more cars

from customers and benefitting from some economies of scale with IRC overhead and transportation as utilization increases.

Source more cars from customers: Cars sourced from customers benefits retail GPU and wholesale GPU (where cars are sold to auctions because they don't meet retail standards) because they are more profitable than cars sourced from wholesale auctions (no auction fees and less competitive bidding process). Sourcing vehicles from customers typically provides \$200 - \$500 more in profit per unit compared to acquiring a vehicle through auction.



In 3Q19, Carvana grew total cars purchased from customers to 32,000 vehicles, or nearly 70% of retail units sold to customers. They sourced over 30% of retail units sold from customers, up from 17% in the prior quarter.

Increasing IRC volume/capacity: The more vehicles that an IRC serves, the lower the cost per vehicle as costs scale. Collectively the IRC's have the capacity to inspect and recondition 350K vehicles per year. More IRC's also lower transportation costs as distance and time to delivery decrease per unit sold.

3. SELLING OTHER PRODUCTS AND SERVICE

Other sales revenues primarily consist of gains on the sales of automotive finance receivables Carvana originates and to a lesser extent sales commissions on vehicle service contracts (VSCs) and commissions from GAP waiver coverage. It's important to understand Carvana's automotive finance business since it makes up roughly half of gross profits and will likely continue to be a driver of profits going forward.

CARVANA'S AUTOMOTIVE FINANCE PLATFORM

Automotive finance is a very large market and has been a very profitable space for market participants historically. The industry is estimated to have more than \$1 trillion in outstanding receivables at the end of 2018. Carvana's vertically integrated auto lending model is improving traditional auto financing and unlocking significant incremental profit opportunities.

In auto lending there are three players that work together to finance a car;

1. Dealers: Acquire the customers, ensure vehicle quality, and arrange loan information for lenders.
2. Lenders: Underwrite the loan by pulling credit score and pricing the loan.
3. Investors: Own the loan and earn a risk adjusted rate on the investment.

Lenders/underwriters do the most work and earn the most profits from the transaction. Dealers earn some profits and the investors will earn a risk adjusted profit from owning the loan over its life.

The most common way for the three players to interact in auto lending is through "indirect lending" where the dealer (car dealership) brings in the customer and then partners with lenders who compete and underwrite the loans. The lenders

may partner with investors who will ultimately hold the credit risk. Lenders may also play the role of investors by holding the loans they underwrite until maturity which is common with banks and credit unions.



The indirect model provides a system with limited price discovery. At traditional dealerships, sales managers and finance managers are typically paid a commission based on the profit of the entire bundled transaction of a used car (selling price, trade-in value of customers car, interest rate on loan, vehicle service contracts, etc.).

The lender/finance partner typically compensates the dealer through a fee based on the spread between the loan offer rate provided by the financial institution and the final loan rate the dealer negotiates with the customer. Dealers are incentivized to get the highest profit possible on the entire transaction and will adjust the pricing on the different elements of the transaction based on customer preferences, such as lowering the interest rate on a loan while increasing the selling price of the car.

When third party lenders are used to underwrite the loan, they do not necessarily know the true market price/value of the vehicle which impacts the loan to value, risk adjusted interest rates, and therefore overall credit worthiness of the loan.

CarMax uses a hybrid model (combines the dealer and the lender) which replaces some of the outside lenders with an in-house lending segment. For some customers, there's an in-house lender while for other customers there are outside lenders who then pair with investors.

HYBRID MODEL (CARMAX)



Carvana's model is a fully integrated retail and financing platform which provides a fully integrated/seamless customer experience.

VERTICALLY-INTEGRATED MODEL (CARVANA)



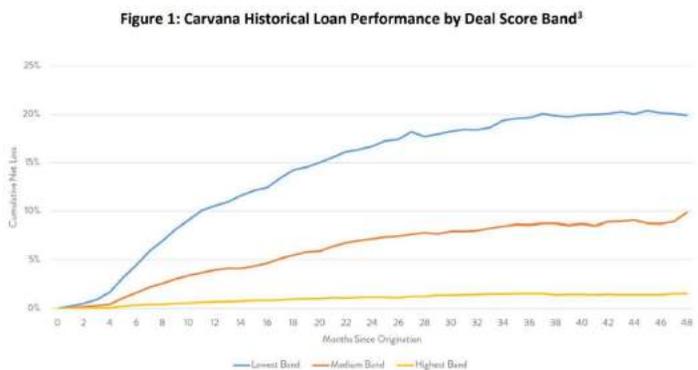
Like the other elements of Carvana's sales model/vehicle purchase, the financing element is transparent with no haggle pricing. Customers fill out a credit application, instantly receive the credit terms and those same terms apply to all the cars on the Carvana website. This provides a seamless customer experience and strong loan economics.

It is almost impossible for multiple third-party lenders working with multiple local dealers to consistently ensure vehicle quality and underwriting information. By fully integrating, Carvana reduces frictional costs by removing dealer relationship management costs, reducing overhead, and automating the loan process under one roof. Not only does this provide strong loan performance by being able to certify vehicle quality, customer credit information, eliminating adverse selection, and optimizing loan pricing, it provides an easier customer experience since they only have to deal with one party for their entire automotive transaction.

There are two key ways to get strong financing gross profits; strong loan performance and lower cost of funds. The loans Carvana underwrites perform better because their integrated process produces better data integrity but also because Carvana's retail model is able to sell cars at a lower price compared to similar quality cars at traditional dealerships. Lower car prices lead to a lower loan-to-value (LTV) ratios and lower monthly payments on the same vehicle which leads to better performing loans.

Below is a chart showing loan performance by Deal Score Band which is Carvana's internal credit score system designed to predict performance of each loan at the time of origination using numerous credit attributes of the borrower, specific vehicle, and terms selected by the customer. While the Deal Score Band is correlated to the FICO score, it is more predictive of future loan performance due to its customized sample, data, and methodology. Higher deal scores imply better expected loan performance.

The chart below shows the cumulative net loss (CNL) by Deal Score Band which is calculated by the total cumulative charged-off balance through the end of the given period, net of recoveries, divided by the total original principal balance of the pool. The lowest band (blue) has the higher losses and the highest band (yellow) has the lowest losses suggesting Carvana's Deal Score Band is a strong predictor of loan performance.



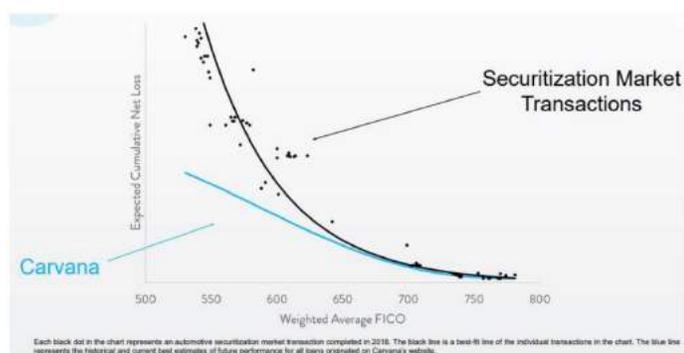
Source: Company investor relations

For reference of the size of each band, during 2018, 53% of the loans Carvana underwrote were in the highest band, 37% were in the medium band, and 10% were in the lowest band.

Carvana's loan pool performance compares favorably to five large securitization market issuers with public information available who fund fixed pools of auto loans in the securitization markets.

Carvana's cumulative net loss (CNL) is lower than the equivalent weighted average FICO of other securitization market issuers.

The chart below also reflects how Carvana's loans have lower expected cumulative net losses to other securitization market transactions with comparable weighted average FICO scores.



Source: Investor Day Presentation

Carvana has monetized/sold the loans they generate/underwrite following the completion of the auto sale and the 7-day return policy to their finance partners. They historically do this through a combination of forward flow and fixed pool sales and more recently through securitizations.

TOTAL GPU OPPORTUNITY

During Carvana's Investor Day in 2018, they listed the potential drivers of gross profit growth totaling \$1,250 - \$2,550 in potential GPU expansion, which implied a GPU of \$3,500 - \$4,500 at scale. Note management's long-term margin guidance of a gross margin of 15%-19% at scale would imply a gross profit of \$2,800 - \$3,600 on a \$19,000 vehicle.

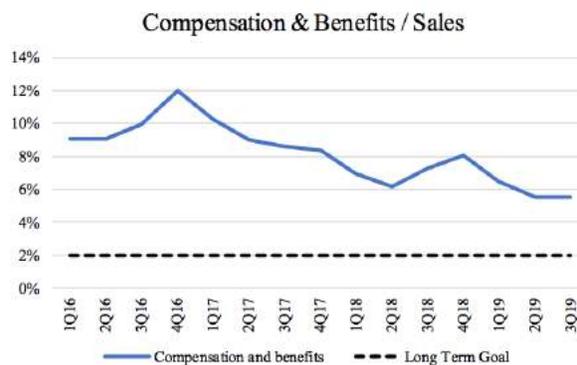
Key Drivers of Gross Profit Expansion	Potential Impact: \$1,250 - \$2,550
Reduce average days to sale	\$100 - \$200
Scale provides cost of sales efficiencies	\$100 - \$200
Increase retail cars sourced from customers	\$150 - \$450
Increase wholesale cars sold	\$200 - \$600
Increase conversion of existing products	\$100 - \$200
Lower cost of funds on financing	\$500 - \$700
Addition of new products and services	\$100 - \$200+

Source: Investor Day Presentation

DEMONSTRATE OPERATING LEVERAGE

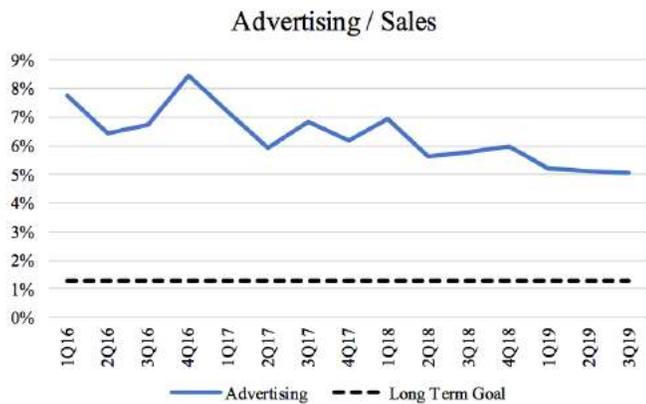
Following management's #1 core objective to grow retail units and revenue and #2 objective to increase total gross profit per unit, their #3 priority is to demonstrate operating leverage as the company continues to scale. The charts below show each SG&A line item as a percent of sales.

Compensation and benefits consists of fulfillment and customer service advocates who do last mile delivery, auto hauler drivers who transport cars from IRCs to local market hubs, technology & corporate expense who handle customer calls, title/registration, and corporate, R&D, finance, HR, senior management, etc. In the long-term, 4/5th of compensation & benefits will consist of fulfillment & customer service and 1/5th will consist of technology & corporate.



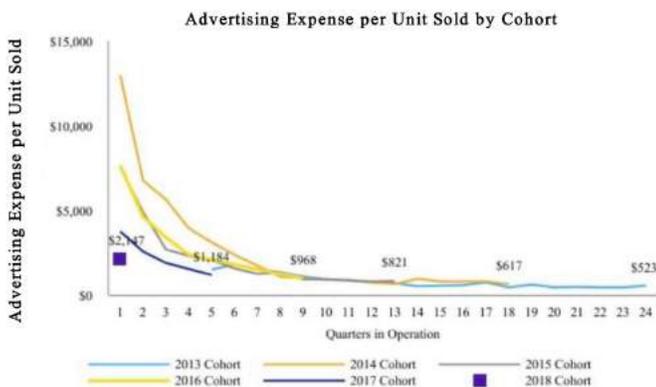
Source: Saga Partners, Company filings

Advertising expense has historically declined as markets ramp up/mature with accumulated awareness and word of mouth.



Source: Saga Partners, Company filings

Each new cohort reflects lower initial advertising expense per unit sold as new markets benefit from nearby advertising spend and quicker ramp up in unit sales.



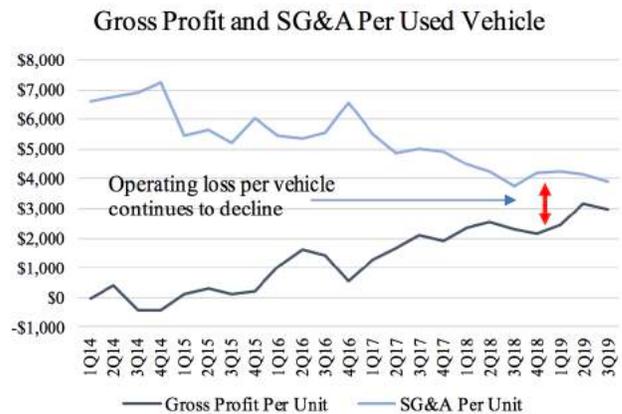
Source: Carvana 2018 Annual Report

Logistics & Market Occupancy costs decline with scale as capacity utilization increases and adding more IRCs over time reduces freight times and distance between customers and the cars they purchase.

UNIT ECONOMICS AT SCALE

Management provided long-term margin goals they expect to achieve as Carvana scales, reflecting SG&A costs declining to 6%-8% of sales vs. the 18.7% during 3Q19. At scale, management is targeting 8%-13.5% EBITDA margins and 7.5%-12.5% EBIT margins.

The chart below shows how gross profit per unit has consistently grown over time as unit volumes have increased while SG&A per unit has declined as fixed costs have scaled.



Source: Saga Partners, Company filings

While Carvana is still scaling its high fixed cost operating structure, the operating loss per vehicle has improved significantly and Carvana will be earning an operating profit per vehicle as unit volumes continue to grow.

Assuming an average used vehicle sold for \$19,000, Carvana would earn a gross profit of \$2,800 - \$3,600 and an operating income of \$1,300 - \$2,500 per a used vehicle.

COMPETITIVE ADVANTAGE / BARRIERS TO ENTRY

SCALE

Relative size is very important in e-commerce. Similar to what happened in the general merchandise e-commerce industry with Amazon dominating the U.S. space, once Carvana establishes itself as the leading online auto dealer and volumes pass a certain threshold, it will be very difficult for any competitor to compete.

Demand generates further demand. As Carvana moves into new markets, demand will increase, which enables Carvana to carry more inventory. A broader vehicle

inventory further improves their offering across the entire market, enabling them to increase market share. Higher volumes and more inventory mean more IRC's and therefore shorter delivery times and lower transportation costs.

If one day Carvana has 100,000 vehicles available on their website while the second largest online car dealership has 20,000, Carvana is more likely to have the type of car a customer is looking for, sell it for a lower price, and deliver it faster. That drives more customers to purchase from Carvana which helps them grow vehicles inventory further, which attracts more customers, etc.

Carvana is a business that becomes better and as it gets bigger. Its value proposition only becomes stronger which strengthens its relative advantage over competitors. Once the self-reinforcing flywheel begins rolling, it will be very difficult for traditional dealership or relatively smaller competitors to compete.

DATA

Since the entire customer transaction happens digitally, Carvana is able to use its data and algorithms to help determine the vehicles it makes available to customers, the fair price of those vehicles, accurate trade in value to offer, the financing terms, and VSC and GAP waiver coverage options available. Algorithms establish prices for vehicles based on recommended initial retail price points as well as retail price markdowns for specific vehicle-based factors, including sales history, consumer interest, and prevailing market prices. Data controls the logistics infrastructure which enables them to offer customers fast, specific and reliable delivery times. With financing, the more data Carvana accumulates the better they can underwrite loans.

LOGISTICS NETWORK

Third party automobile haulers typically run at very low occupancy and indirect routes, therefore the average cost to ship a car on a per mile basis is pretty high and often takes several weeks. By transporting vehicles in-house through

its hub and spoke logistics network, Carvana is able to significantly lower the time and cost to ship a car, estimated to cost less than \$0.20/mile vs. a third party's average \$0.75-\$1.00 per mile. As Carvana builds more IRC's/hubs, transportation costs and times will decline.

COMPETITORS

VROOM

Currently the second largest online automobile dealer with a similar model as Carvana is Vroom. Recent reports state Vroom has raised a total \$721 million in capital with a potential company value over \$1 billion. Vroom has one vehicle reconditioning center in Houston and also partners with third party reconditioning facilities. In 2018, Vroom laid off about 30% of its staff after a failed attempt at building brick and mortar car dealerships. With size being very important to its e-commerce platform, Vroom has a lot of room to make up, only having ~4,800 vehicles available for sale on its website.

CARMAX

CarMax is probably the most comparable publicly traded company to Carvana since it does not offer parts & services like the traditional dealership, only selling used cars and like Carvana has a significant finance arm called CarMax Auto Finance (CAF). One of CarMax's primary differences is it still focuses on using a storefront and salesperson to provide an omni-channel sales and distribution strategy where customers can buy a car in one of its store locations or through a combination of online and in-store. CarMax has about 200 store fronts where vehicles across its nationwide inventory of ~70,000 cars which can get shipped to a nearby store. While CarMax has extensive inventory available, the majority of customers purchase a car from their local storefront. In fiscal 2019, ~34% of vehicles sold were transferred at the request of the customer. CarMax primarily uses third party transportation providers

for longer hauls which puts it at a transportation cost disadvantage (see logistics network section above).

CarMax has been very successful competing with traditional dealerships by using customer-friendly sales practices and utilizing its customer data. Salespeople at traditional dealerships earn commission by selling vehicles that earn the highest possible gross profit rather than selling customers the vehicle they actually want or need. CarMax's salespeople receive the same commission regardless of the car they sell. Combined with its wider inventory selection and extensive pricing data, CarMax has been very successful competing with traditional dealerships, growing sales at a ~10% CAGR of the last cycle.

While CarMax has been successful historically and will likely continue to be successful in the foreseeable future relative to traditional used car dealerships, CarMax's current omnichannel store front and salesperson operating model, combined with higher transportation costs, give it at a cost structure disadvantage to Carvana. Carvana's capital investments have largely gone towards its technology/online experience, centralized inventory, and logistics network while CarMax's capital investment has gone into opening specific markets and its salesforce. This provides Carvana with more attractive unit economics, helping it scale at a much faster rate.

CAPITAL REQUIREMENTS, BALANCE SHEET, AND LIQUIDITY

Obviously when a company is generating operating losses as it scales, it requires capital to fund those losses and the other investments in inventory, vending machines, and IRCs.

Since 2014 through 3Q19, Carvana used ~2.2 billion in cash which has been financed through debt (~\$1.1 billion) and issuing equity (~\$1.2 billion).

Since Carvana IPO'd, it has had two follow-on offerings raising both equity and debt. While capital raises are often looked

down upon by investors, Carvana's dilution was fairly limited especially when considering the capital is helping support the Company's 100%+ growth.

Management stated the follow-on offering earlier this year provides Carvana the ability to be more aggressive in their growth and adds financial flexibility with high yield debt replacing the sale-leaseback financing used to finance capex. They do not expect to issue any more equity and feel good about their current capital cushion.

At the end of 3Q19, Carvana had ~\$650 million in liquidity.

Most of the inventory and capex related to IRCs, vending machines, and haulers have access to adequate financing, therefore liquidity will be required to fund the operating losses. The majority of Carvana's liquidity is needed to fund the operating losses until they scale to positive operating cash flow.

Based on current volumes, Carvana is using ~\$50 - \$80 million in cash a quarter. Operating losses should decline as fixed costs scale at which point the gross profit of each incremental vehicle sold should largely drop to the bottom line. With ~\$650 million in liquidity available, Carvana has a good runway to fund expected operating losses and it is unlikely they will require additional capital raise in the foreseeable future.

MANAGEMENT / OWNERSHIP

Ernie Garcia III is the founder and CEO of Carvana. Carvana was started as subsidiary under DriveTime and was later spun out during the IPO in 2017. DriveTime is a used car dealer and finance company based in Tempe, Arizona that is owned and managed by Ernie's father, Ernie Garcia II. While working for DriveTime during 2007-2012, Ernie III came up with the idea for Carvana and his father encourage him to start the company.

When Carvana IPO'd in 2017, it went public as an "up-

What really matters is Ernie Garcia III and Ernie Garcia II control 97% voting power in Carvana. They primarily own Class B shares in Carvana which have 10-1 voting rights and can be converted into Class A shares which are publicly traded. As of the last proxy, Ernie Garcia II's ownership in Carvana is worth ~\$8.5 billion and Ernie Garcia III's ownership is worth ~\$1.5 billion based on current market prices.

players in each vertical typically have ~20% market share.

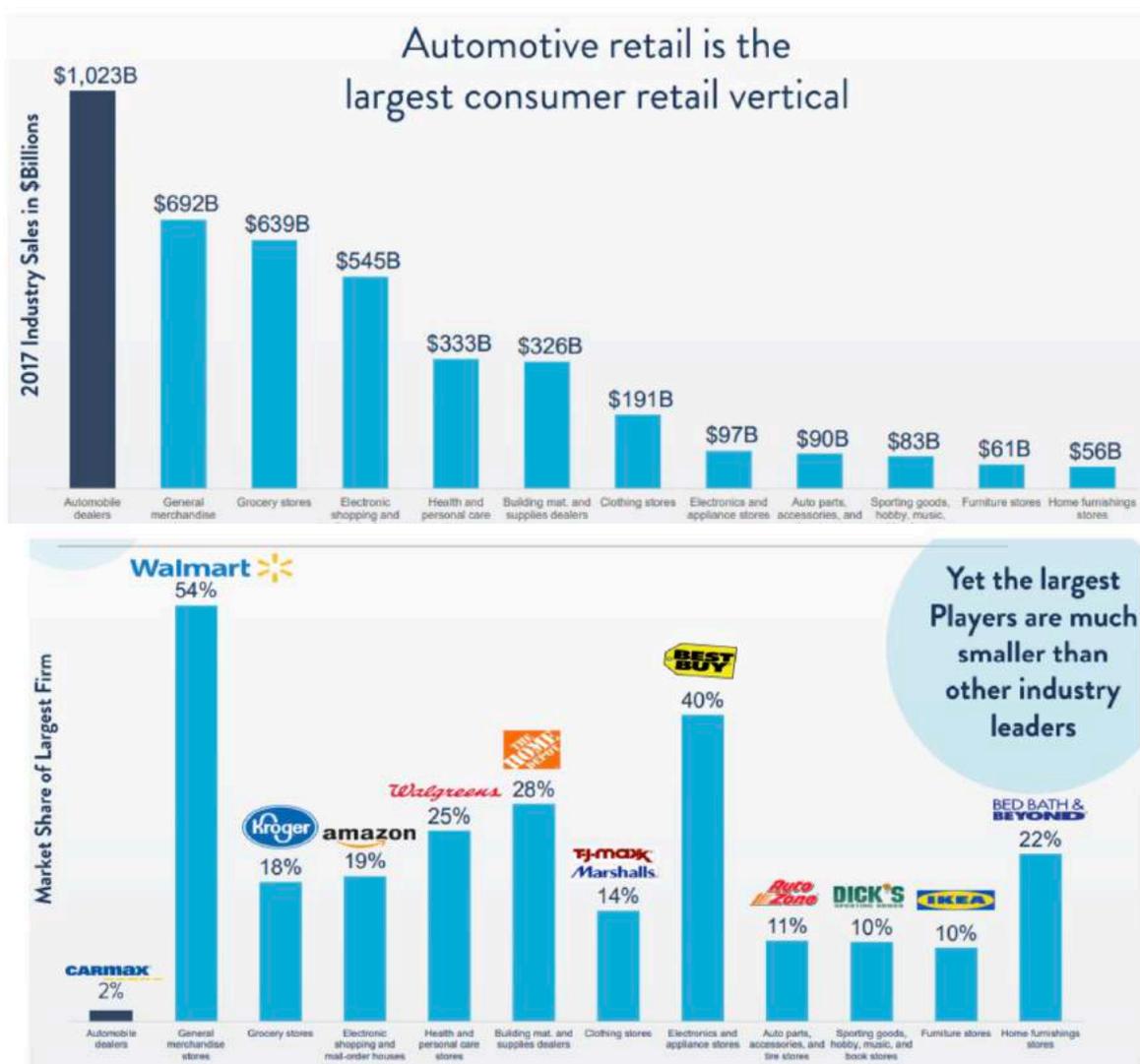
Of the ~\$1 trillion in automotive retail sales, ~\$764 billion was used car sales. There are roughly 270 million automobiles in the U.S. and the average consumer buys a car every 6.75 years, resulting in ~40 million used car transactions each year (270 cars / 6.75 years).

One can argue that if there were lower friction costs in time, money, and frustration during the purchase of a used car, people would increase the frequency they buy and sell cars. If the average used car price were ~\$1,000 - \$1,500 cheaper for the same quality car, only took 10-15 minutes to purchase online, and would get delivered directly to your home, it's reasonable to expect the frequency in which people buy cars would increase.

MARKET SIZE / OPPORTUNITY

Automotive retail is the largest consumer vertical in the United States with over \$1 trillion in sales.

Despite its size, it is the most fragmented vertical with the largest player only having 2% market share. The largest



Source: U.S. Census, public company filings

Time Between Transactions (years)	3	4	5	6	7
Annual Transaction (in millions)	90	68	54	45	39
Market Growth	125%	69%	35%	13%	-4%

Source: Saga Partners

If the average car owner bought a car every 6 years compared to the current average of 6.75 years, the total number of used car transactions would increase to 45 million, therefore increasing the total market by 13%. If the frequency fell to 5 years, total transactions would increase to 54 million vehicles a year. [See figure above]

Carvana has grown at a rapid rate since launching its first market in Atlanta in 2013. Atlanta reached an estimated 1.94% market share in their region at the of 2018 growing just under 30% that year. Nashville and Charlotte, the 2014 cohort, reached 1.11% market share and growing over 50% that year. Newer markets have followed similar trends in market share gains.

Management estimates they can now reach ~67% of the total U.S. population based on their existing markets, up from 59% at the end of 2018 and they believe Carvana will ultimately be able to reach 95% of the U.S. population. Simply assuming that Carvana does not open up any more markets (highly unlikely) and the current cohorts follow similar market share gains as prior cohorts, Carvana could reach over 500,000 retail unit within four years (see appendix 1). Current consensus estimates have them reaching 500,000 units within three years, providing a 40% CAGR from 2019 expected units.

Management has outlined their goal of reaching 2 million units, or ~5% market share based on 40 million cars sold per year. At this volume, vehicles are expected to average 30 days to sale which means Carvana would require about 165,000 available cars on their website. That level of selection would be 10x as many cars that are available from all dealers and private-party sellers in the average market.

The following tables show a sensitivity analysis reflecting potential market share of all U.S. used vehicle transactions and income per transaction based on management's long-term guidance. These tables are just a simple, high level, wide

ranging analysis of potential long-term outcomes using unit economics/margins at scale. They are not at all comprehensive and are just to show the potential if Carvana continues its strong trends.

There are roughly 40 million used cars sold in the U.S. each year. Keeping total used vehicle transactions fixed at 40 million per year, 2.5% - 10% market share provides 1 - 4 million retail units sold. A 6.5%-14% EBIT margin on an average used vehicle price of \$19,000 provides between ~\$1,250-\$2,750 in EBIT. Based on the below scenarios, EBIT would range between \$1.3 billion (2.5% market share and \$1,250 EBIT) and \$11 billion (10% market share and \$2,750 EBIT).

Assuming interest expense remains ~2% of sales and a 25% tax rate, net income would range between 3.5% and 9.5% of sales, or \$650 - \$1,775 per vehicle, providing a potential range based on the below scenarios between 650 million - \$7.1 billion.

If you put a market average P/E multiple of 18x earnings, market cap would range between \$12 billion - \$128 billion.

The next question is how fast can Carvana reach these volume levels. The first market, Atlanta, took six years to reach ~2% market share. With subsequent market cohorts following similar trends, Carvana could easily reach 500,000 units within three years or by 2022. Management set a goal of reaching 2 million units or 5% market share.

If Carvana is the dominant online platform for buying and selling cars, and continues to offer a better customer experience, lower prices, and more selection than any alternatives, there really isn't a reason for the 5% market share ceiling. As Carvana builds out their transportation/logistics infrastructure, IRCs, vending machines, and inventory levels, it's not unreasonable for Carvana to take 10% market share (4 million units) or even 20% (8 million units).

If it takes 10 years for Carvana to reach 4 million units (10% market share) and they earn \$1,215 per vehicle, putting an 18x multiple on those earnings (CarMax's current multiple on high single digits expected growth), provides an ~\$87.5 billion market cap, or a 20% CAGR from today's price assuming nominal share dilution. If Carvana is still able to grow at a 20%+ rate at that time, it's reasonable to expect the market to place a higher multiple on those earnings. These scenarios are simply to put rough numbers on the total market opportunity and margin potential and are not at all comprehensive of potential outcomes.

What you can see is if Carvana is successful in winning market share from traditional brick and mortar used car dealers by reducing frictional costs in the buy/selling used cars and reaches its scale margins, there is a lot of potential upside. Shares look very attractive based on the current ~\$15 billion market cap if Carvana is able to continue to gain market share, scale operating leverage, and increase its competitive advantages,

RISKS

- 1. EXECUTION:** Carvana is in the very early stages of its development while its disrupting an industry. While Carvana's trends look strong, they have to continue building their competitive advantages. It is reasonable to

expect other companies to try and copy Carvana's online car buying experience, delivery, and logistics network.

2. FUTURE GROWTH, CAPITAL REQUIREMENTS & OPERATING LOSSES:

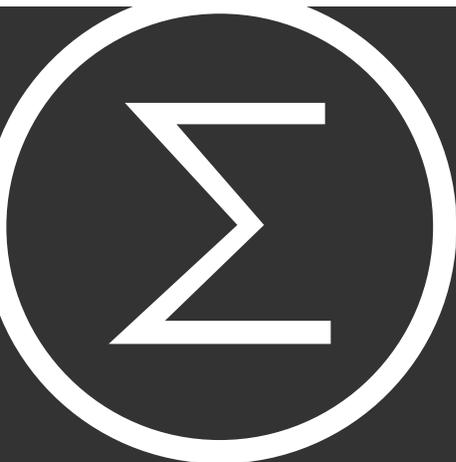
Carvana requires significant upfront capital investments and incurs operating losses until it reaches scale. If Carvana does not continue its strong growth trends then it will not be a profitable business. While it has access to \$650 million in liquidity, if operating losses continues they may require additional equity capital raises that dilute shareholders.

3. ECONOMIC cycle:

Automobile purchases are significant consumer purchases and a downturn in the economic cycle could cause consumers to delay car purchase and slow Carvana's growth.

CONCLUSION

Carvana is disrupting the used car industry through its online platform to buy and sell cars. By offering a better overall customer experience, wider selection, and lower prices, Carvana is able to grow volumes at a fast rate, improve gross profit per unit, and scale fixed costs. As Carvana establishes itself as the dominant e-commerce automobile dealer, it will reasonably take significant market share in the very large and highly fragment market and earn significant economic profits.



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FINALIST LARGE CAPS



Aubrey Brocklebank

Analyst at Mayar Capital Management

BADGES:

Vestas Wind Systems A/s

Asset: **Equity**

Symbol: **VWS:DC**

Idea Posted: **12/13/2019**

Idea Updated: **12/16/2019**

RETURN TO DATE:

-6.06%

EXPECTED RETURN:

87.34%

LONG

ATTACHMENTS



TIMEFRAME

2-5 Years

SITUATION

Growth At Reasonable Price

MARKET CAP

128.1B DKK

Plenty of tailwinds for a great value stock that could rerate, benefit from significant structural growth, and provide generous capital returns. It is also very ESG friendly



About Aubrey Brocklebank

Aubrey was promoted to Director at Mayar Capital after three years of exceptional performance. Before joining Mayar in 2015 Aubrey was an analyst Odey Asset Management, where he had worked for two years with coverage of Software and Chemicals on a global basis. Prior to Odey he served as a research analyst at Verdes Management and as an investment manager at James Brearly & Sons. He began his investing career on the VCT desk (investing in micro-cap stocks) at Rathbones in 2007. Aubrey has a first class degree in Law and a masters in Competition Law from UCL.



About Mayar Capital Management

Mayar Capital invests globally in the securities of companies whose businesses have durable economic moats, understandable and ethical business models, favorable long-term economics, strong financial positions, and quality, shareholder-friendly management teams. We want to pay reasonable prices and place significant amounts of our capital into such rare opportunities and continue to own such companies as long as these conditions are satisfied.



Mayar Capital Management is actively seeking capital on SumZero's Capital Introduction platform. To be connected, please reach out to capintro@sumzero.com.



FINALIST LARGE CAPS



Tom Choi

Managing Partner at Third Square Capital

BADGES:

💡 **Xiaomi Corp Ord B**

RETURN TO DATE:
Pending

Asset: **Equity**

Symbol: **273B HKD**

Idea Posted: **12/16/2019**

Idea Updated: **12/20/2019**

EXPECTED RETURN:

218.53%

LONG

ATTACHMENTS



TIMEFRAME

2-5 Years

SITUATION

Contrarian

MARKET CAP

273B HKD

A great opportunity to invest in the most exciting consumer hardware company for 40% less than IPO price in 2018



About Tom Choi

Throughout his life, Tom has traveled around the world for his passion in social anthropology and gained deep understanding about human societies. His unique combination of curiosity and ability to synthesize information gathered through his personal experiences has helped him realize many insights of the world and consumers, many of which he turned into successful investments. Since July 2012, Tom's contrarian investment strategy has returned 330% net of fees or 22.9% annually. Tom holds an MBA from MIT Sloan and a BA from Korea University and is a CFA® charter holder.



About Third Square Capital

As contrarian investors, we generate outstanding investment returns by understanding real consumer insights that are frequently missed by the short-term focused stock market. Our objective is to deliver long-term superior returns for our investors with a focus on global consumer-driven, long-term growth companies. Our core competence lies in our strong insights about consumer demands and we use them to capture investment opportunities when the stock market misses the big picture.



Third Square Capital is actively seeking capital on SumZero's Capital Introduction platform. To be connected, please reach out to capintro@sumzero.com.

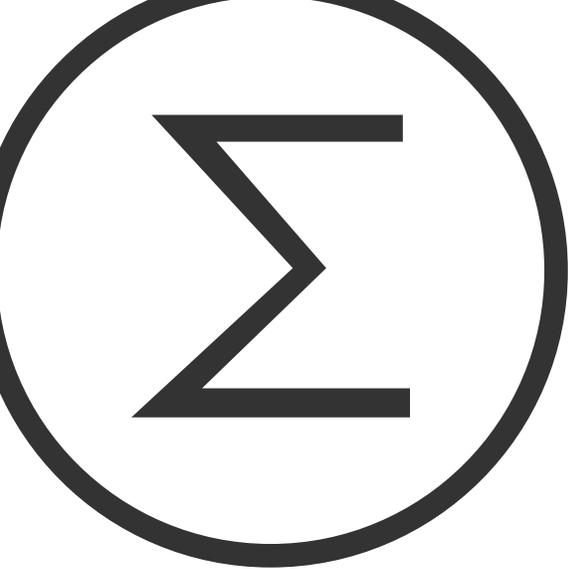


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The research on SumZero cuts through the noise that pervades the industry and provides its community with in-depth, actionable investment research and data. The platform further enables members to build a track record, expand their networks in relevant capacities, and identify further professional opportunities within the industry.

SumZero offers several ancillary services in support of our research platform. These services include capital introduction, buy-side career placement, media placement and more.



THE COMMUNITY

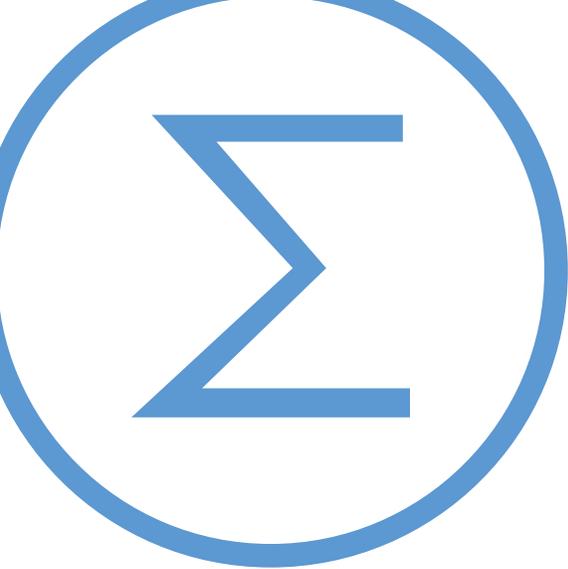
SumZero's carefully vetted community of members is currently 20,000+ and growing globally. Driven by a network effect, the community's ongoing growth stimulates platform interaction and engagement - steadily building a robust collection of data that continuously delivers value to its users.



20,000+
MEMBERS GLOBALLY



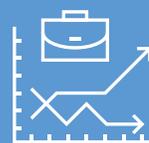
300+
AVERAGE NUMBER
OF NEW CONTRIBUTING
ANALYSTS EACH YEAR



THE RESEARCH

SumZero provides investment professionals access to continuous idea generation and allows them to monitor what their peers are saying about names in which they're currently invested, or looking to invest in.

There is no other community-driven platform or network from which an investment professional can derive more direct value.



5,700+

COMPANIES COVERED



2,400

AVERAGE WRITE UP WORD LENGTH



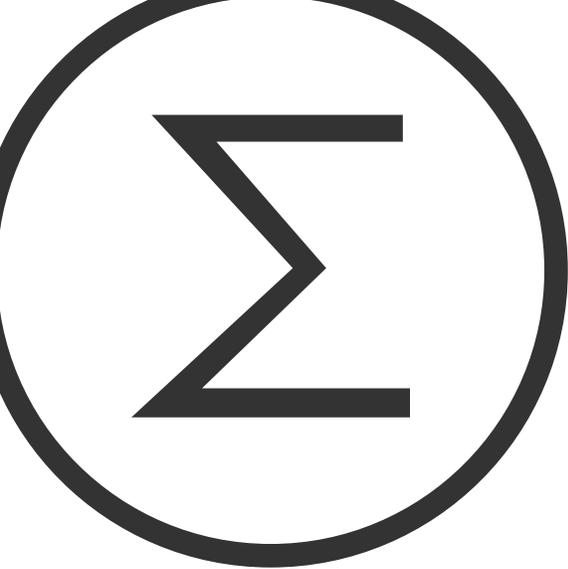
13,000+

PROPRIETARY RESEARCH REPORTS



1,200+

AVERAGE NUMBER OF NEW RESEARCH REPORTS PER YEAR



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SUCCESS METRICS

While SumZero Cap Intro never guarantees the placement of capital to any individual firm, the platform can guarantee recurring exposure to a highly selective group of institutional LPs with active mandates associated with fund allocations. Some success metrics follow.

UNIQUE ALLOCATOR INQUIRIES TO FUNDS

2014	86
2015	101
2016	190
2017	117
2018	356
2019	593

OF DOWNLOADED ATTACHMENTS BY TYPE

INVESTOR LETTER	4400+
PITCHBOOK	3100+
RETURNS	450+
CASE STUDY/ WHITEPAPER	470+
OTHER	750+

CROSS BORDER INQUIRIES TO FUNDS	150+
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COMMUNITY FEEDBACK

SumZero provides investment professionals access to continuous idea generation and allows them to monitor what their peers are saying about names in which they're currently invested, or looking to invest in.

There is no other community-driven platform or network from which an investment professional can derive more direct value.

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SIDDHARTH CHORARIA
HEAD OF ANALYSIS, AMIRAL GESTION

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JOHN ROLFE
FOUNDER/PM, ARGAND
CAPITAL ADVISORS

“ SumZero has been beyond helpful to my hedge fund career, giving me the exposure that eventually led me directly into not one, but two hedge fund jobs. For anyone who works on the buy-side, if you can post your ideas on SumZero, I highly encourage you to do so as it's an increasingly competitive investment in your personal brand. As loyal and grateful as I am to Wharton, I have often said that SumZero has done more for my hedge fund career than my MBA ever did. I simply cannot thank you guys enough for this and for giving me the chance to compete for eight years in the world's biggest, most legit online community of hedge fund investors. ”

VICTOR BONILLA
PORTFOLIO MANAGER,
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