Letter to investors, Q2 2019

Performance

The model portfolio returned approximately 18.4% net year to date. As of June 30th, 2019, the top ten positions comprised 77% of the portfolio, and the portfolio held 10.5% in cash.

Positions with an average weight over 1% of the portfolio in the quarter were: Alliance Data Systems Corp., Avaya Holdings Corp., Burford Capital Ltd., Calloway's Nursery Inc., Carmax Inc., Carvana Co.[1], CRH Medical Corp., Crossroads Systems Inc, Exor NV, Fairfax Financial Holdings Ltd., GCI Liberty Inc., Naspers Ltd., Oaktree Specialty Lending Co., Onesoft Solutions inc., Quarterhill Inc, Tencent Holding Ltd., Viemed Healthcare Inc., and Wandisco Plc.[2]

The market experienced some volatility in May, and there is continual chatter in the news on rates, economic cycles, and trade wars, so I felt it would be helpful briefly to discuss my view on market volatility in general, and how one might approach investing in an uncertain environment.

Balancing a realistic long-term view on volatility with careful management of the portfolio

In my first letter, I wrote about the advantages of investing for the long haul, and participating in the immense wealth generating attributes of the stock market. Nevertheless, the inevitable exposure to frequent and steep drawdowns bears discussion.

Dr. Robert Frey, who was previously a Managing Director at Renaissance Technologies, the most successful hedge fund of all time, where he was a member of the management committee that oversaw the development and management of the Meritage Fund, Renaissance's internal fund of hedge funds, gave a presentation titled "180 years of stock market drawdowns." [3]

A few of his key insights are:

1. It is important to zoom out and consider a long-term horizon to better understand the character of an asset class such as stocks
2. The overall character of the stock market has not changed much over 180 years
3. Extreme volatility is normal, and events such as the Great Depression are not outliers
4. One spends 75% of the time in a drawdown and over half the time in a major drawdown

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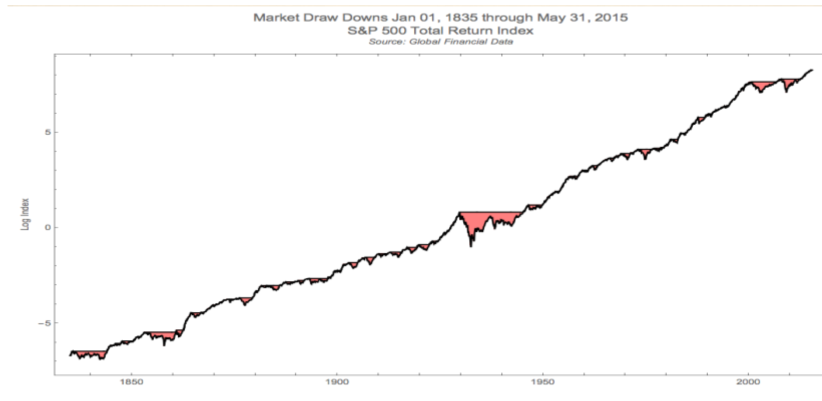
[1] Via short put options. The economic equivalent of funds at risk were greater than 1% of the portfolio

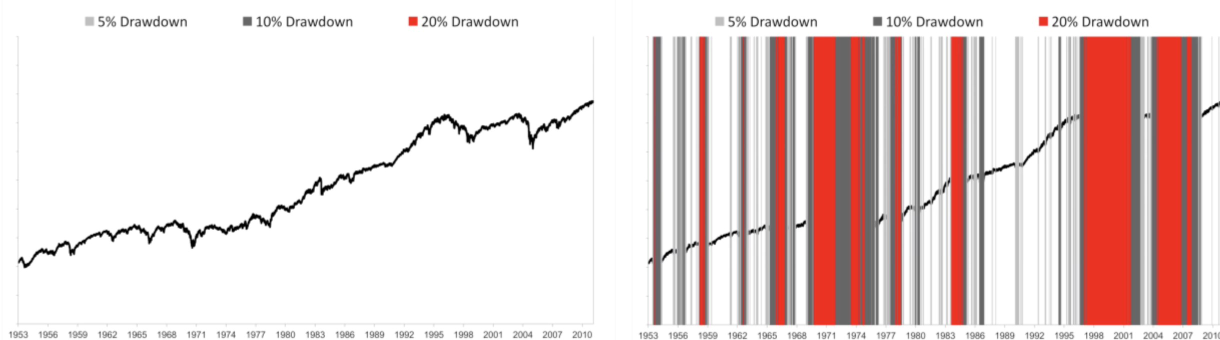
[2] There is no assurance that any of the securities discussed herein will remain in an account's portfolio at the time you receive this report or that securities sold have not been repurchased. It should not be assumed that any of the securities transactions or holdings discussed were or will prove to be profitable. See "Disclaimers" at the end for more details.

[3] https://www.fqscapital.com/Documents/180%20Years%20of%20Market%20Drawdowns%20-%20Dr%20Robert%20J.%20Frey.pdf



Source: Dr Robert Frey, 180 years of market drawdowns

Another presentation "What Other Industries Teach Us About Investing" [4], by Morgan Housel is particularly illustrative. He compares a 60-year performance chart of the S&P 500, with the same chart overlaid with bars showing the frequency of 5%, 10% and 20% drawdowns. It is striking how the drawdown bars cover most of the chart, even while the index has performed well.



Source: Morgan Housel "What Other Industries Teach Us About Investing"

It should be clear from the above that volatility is a "feature and not a bug" of the stock market. While we cannot predict drawdowns, we know they are surprisingly frequent.

I do not mean to imply a blind "fire and forget" approach. A favorite book is "The Art of Execution" by Lee Freeman-Shor[5], who managed a $1bn fund-of-funds and analyzed 1,866 real-world investments by 45 managers he invested in, over a 7-year period. He convincingly argues that successful investors carefully managed losing positions while letting their winners run, and that this behavior was significantly more important than the ability to predict winners. This makes sense because returns are geometric in nature, so while an 11% return makes up for a 10% loss, a whopping 67% return is required to make up for a 40% loss. In Freeman-Shor's analysis not one investment that lost more than 40% went on to produce the required returns to get back to breakeven, so losing positions needed to be managed. Successful investors fell into one of two

[4] https://microcapclub.com/wp-content/uploads/2018/01/Morgan-Housel-on-What-Other-Industries-Teach-Us-About-Investing.pdf
[5] https://www.amazon.com/Art-Execution-worlds-investors-millions/dp/085719495X

groups: “snipers” killed a position when it experienced a 20-30% drawdown, thereby preventing a catastrophic loss on the position; while “hunters” doubled down on losing positions, adding more capital to accelerate the dollar value of the return to reach profitability. Both groups were able to produce superior returns, even though only 49% of their investments were profitable. To use baseball parlance, it is about slugging percentage, and not batting average.

I like to differentiate between general market factors and individual position exposures. From an overall portfolio view, given how difficult it is to predict drawdowns ahead of time (wouldn’t that be nice), it makes sense to have an amount of cash on hand to take advantage of depressed prices when they occur. This lessens the impact of drawdowns and positions one to buy quality companies aggressively when they are “on sale”, even if this cash drag from having a part of one’s total balance not invested might result in relative underperformance in a bull market.

From an individual position perspective, broadly speaking, I adopt a barbell strategy with a significant part of the portfolio invested in companies that I believe are robust and that I would want to own for the long haul, which affords me the opportunity to place a portion in smaller names that I believe have attractive growth prospects. It is important to carefully monitor individual positions, especially the less established names, for signs of trouble, focusing on their long-term operational/competitive development, and to take decisive action when needed (but only then). My approach is to be a “hunter” as per the book’s definition. However, if a position has declined on me and I find myself, for whatever reason, unwilling to double down, it means either that I already have too much of an allocation to the company, or that I made a mistake. In either case, the right answer usually is to reduce or eliminate exposure.

Discussion on a selection of portfolio positions with an average weight over 1%

Quarterhill – New position

I initiated a position in Quarterhill, Inc. a small Canadian company that is undergoing a transformation from a volatile patent litigation company, to a software holding company, modeled on companies such as Constellation Software, Open Text and Engehouse, all highly successful companies that follow a strategy using their significant cash flows to buy strongly cash flow generative software business, generating high returns on investment. At current prices, I believe, investors are exposed to several catalysts for value creation but are not paying for this “optionality”. I have included a more detailed write-up at the end of this letter.

Carvana - exit

This is an example of a “special situation” investment that I occasionally make, where I believe the market offers the opportunity to make an attractive return, with a margin of safety, and in a defined period of time.

Carvana is an online retailer of used cars that was spun out from a successful traditional used car dealership. The son of the parent company’s founder has driven the development of the online business and has built an impressive management team, growing sales rapidly, with great service to customers, and attractive prices. A number of successful value investors own the company as a meaningful proportion of their portfolios, pointing to the company’s attractive unit economics, operational excellence and the impressive statistics the company presents which shows that as their

business matures in each new geographical market, both gross margins and profits ramp up significantly, giving them confidence the company will become wildly profitable once it achieves a critical mass of sales.

In Q4 2018, going into Q1 2019, Carvana's share price fell more than 50% from the mid $70's to the low $30's, in a few short months. To my knowledge there was no real reason for this dramatic decline other than general market conditions, fear of the auto cycle and because the company did not produce sufficiently attractive short-term growth, as the market often demands. I looked for a way to take advantage of what I believed was an over-reaction. Given existing long term holdings in Carmax and Exor (which owns Fiat and Ferrari), I did not want too much portfolio exposure to the auto sector. I also prefer Carmax over Carvana, given the former's history of generating growth through reinvesting its substantial profits at high ROIC (which I will discuss in a subsequent letter), as well as the checkered history of the latter's founder.[6]

I therefore chose to initiate a 4-month short put sale, which I believed presented a favorable risk-reward in a relatively short amount of time. Many investors I speak to, even otherwise sophisticated value investors, either do not understand or dislike options. However, I believe they can be useful tools to express a fundamentally derived view of the prospects of a company.

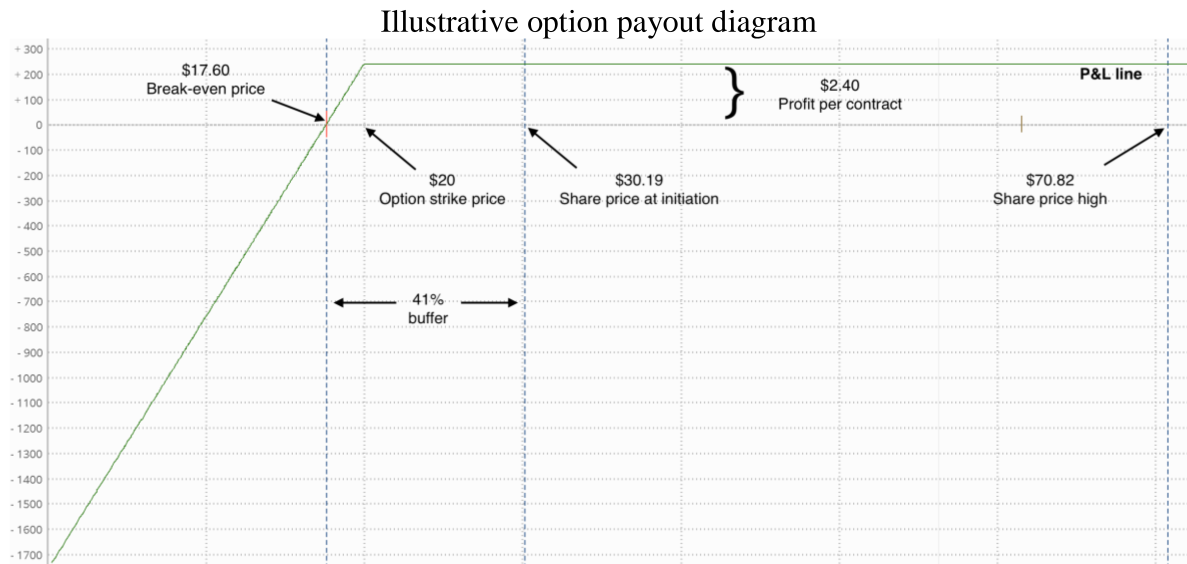
For those not familiar with options, the buyer of a put option has the right, but not the obligation, to sell a specified amount of an underlying security at a specified price within a specified time frame and is often used as insurance to hedge a position in a portfolio. The cost of the options is referred to as the "premium". Conversely the writer, or seller, of the put option can be thought of as someone selling insurance and receiving a premium as compensation for the risk taken to provide the insurance. Should the price of the underlying security remain above the options strike price, the put seller can keep the entire premium as profit, while if the stock declines below the strike at expiration, the put seller will be "put the shares" or in other words forced to buy the shares at the strike price, thereby recognizing a paper loss on the position (but still owning the shares and exposed to any further decline or recovery in price).

Key points:

1. I sold $20 strike puts on January 3rd, with a May 15th 2019 expiration
2. Premium received was $2.40, meaning the price would have had to decline to below $17.60 at expiration, approximately 41% below the then current price, in approximately 132 days for the trade to lose money. A large buffer, in my view
3. Had the share price fallen below $20 by expiration of the option, I would have been happy to have been forced to buy Carvana shares at an effective price of $17.60, a valuation of approximately 1.4x sales for a company growing unit sales over 100% a year

[6] https://www.forbes.com/sites/nathanvardi/2017/12/18/how-an-ex-con-became-a-billionaire-from-used-cars/

Illustrative option payout diagram



Avaya - exit

Avaya provides communications, contact center, and networking services to large enterprises, including to 90% of the Fortune 100. The company was spun out from Lucent Technologies in 2000, but was acquired for $8.2bn by private equity owners in 2007 who saddled it with debt, leading to an eventual bankruptcy in 2017. I invested in the company following its emergence from bankruptcy in 2018 as my work, which included discussions with a contact who manages the data center for one of their customers, indicated the company had a decent moat in the form of strong switching costs, and the company appeared cheap with a Free Cash Flow yield of 11%. Moreover, the new CEO, promoted from within, appeared energetic and driven, promising renewed growth from faster customer procurement that had previously been held back while the company was in bankruptcy (no one wants to buy equipment from a vendor that may not be around in a few months).

Bond funds owned a large proportion of Avaya shares as a result of debt-to-equity swaps during the restructuring. Facing redemptions of their own funds and looking to unload non-core equity investments, they were particularly heavy sellers from October 2018 onwards, as talks of interest rate increases swept markets. I typically like to buy from forced sellers and increased my position size. However, over time I became dissatisfied with the thesis. I found the CEO to be overly promotional, especially when it came to touting Avaya's cloud-centric future. As the company elaborated on its growth plans, I discovered that, for all the hype, the company thought it could only manage 2-4% revenue growth overall, with only approximately 3% from the much promoted SAAS revenue stream. Furthermore, the CEO seemed overly focused on managing the street's short term guidance expectations, the exact opposite of what I look for in the leader of a company I might want to own for a long time.

I exited the position in May when news surfaced that Avaya was considering an auction involving three private equity firms, which temporarily boosted the share price.

Closing thoughts

The markets have a long history of over and under reacting to news. This is what gives patient and disciplined investors the opportunity to profit through buying great businesses at good prices. My overarching goal is to look continually to upgrade the quality of the portfolio, managing any mistakes, and cycling into better ideas when opportunities present themselves.

Samer Hakoura
Alphyn Capital Management, LLC
July 2019

Quarterhill Inc. (QTRH Toronto, QTRH NASDAQ)

Market Cap.:	US$126m (06/14/2019)
Share price:	$1.10
52 week high/low:	$1.55/$0.86
Shares out:	118.8m
Cash:	~$70m (post quarter end)
Debt:	$2.6m

Quarterhill is a technology holding company based in Kitchener, Ontario, in the early stages of a transformational strategy to use the substantial (though irregular) cash flows from its legacy patent licensing business to build a diversified technology company through a repeatable acquisition process targeting recurring revenue, cash flow generative, vertical software businesses. With the hire of a new CEO who was previously head of business development at OpenText Corporation, where he was responsible for deploying $2.5bn into acquisitions, Quarterhill presents investors with the opportunity to buy into a potential long term compounder with low risk of permanent capital impairment, as the value of existing businesses clearly underwrite the current market price (market capitalization of $131m, vs. $70m net cash balance, patent business's average EBITDA of $40m per year over the last 10 years, and two small recurring revenue software businesses that have reached cash flow break-even). Investors are therefore exposed to the optionality of several potential catalysts, while enjoying a wide margin of safety.

Legacy WiLAN business

WiLAN developed W-OFDM technology in the 1990's, a key digital communication method used in wireless transmission that forms the basis of the 802.11 wireless broadband standard (think the tech behind your 2.4GHz wireless home router). Lacking scale and capital to fully commercialize wireless router products, in 2006 the company focused instead on licensing its technology and acquiring further licenses. The current portfolio consists of patents in the automotive, digital television, Internet, medical, semiconductor and wireless communication sectors and WiLAN has established licensing agreements with over 320 companies.

The business is characterized by sporadic license wins of variable size, and profitability is therefore highly irregular.. Over the last 10 years revenues have oscillated between a low and high of $32m and $135m (cumulatively ~$870m) and Free Cash Flow between a low and high of negative $22m and positive $69m (cumulatively ~$108m). Management also highlights $400m of cumulative EBITDA and $135m of cumulative dividends and buybacks over the same period.

As we know, the market dislikes uncertainty, and the stock price has a history of reacting to every patent win or earnings miss, and has been on a distinctly negative long term trend. Sell side analysts have a hard time trying to model the irregular cash flows for valuation purposes, and the situation is not helped by the general perception of US legislation becoming more hostile towards "patent trolls" (for example see https://hbr.org/2017/06/the-u-s-supreme-court-is-reining-in-patent-trolls-which-is-a-win-for-innovation and https://www.nytimes.com/2018/04/24/business/scotus-patent-trolls.html).

An investment in Quarterhill is not predicated on the attractiveness of WiLAN as a standalone business, though it obviously has significant value relative to the whole company's market capitalization, but rather in viewing WiLAN as a source of recurring funds for acquisitions. This is a view shared by Doug Parker, Quarterhill's relatively new CEO, who during a diligence call further highlighted that the market is extrapolating (as it frequently does) a period of maximum pessimism, and that the largely retail shareholder base is at a point of maximum capitulation, while in reality, there is reason for some near term optimism:

- On August 1, 2018 a jury awarded WiLAN $145 million in damages against Apple Inc. for infringement of two patents, a decision that was upheld in a January 4, 2019 ruling, even though the amount of damages was not determined. The court gave WiLAN the option to accept either reduced damages of $10 million or negotiate/re-litigate to determine a figure on damages. Quarterhill chose the latter option, as they felt they stood a high chance of being awarded significantly more. An award of even half the original claim would be substantial relative to the size of the company, and provide significant capital for the acquisition strategy
- On February 28, 2019 WiLAN announced a "comprehensive" semiconductor license agreement with SK Hynix Inc. covering dynamic random-access memory (DRAM), NAND flash memory and other related semiconductor technologies. (Terms were not disclosed)
- On April 23, 2019 WiLAN announced a term license to NVIDIA Corporation relating to memory interface technology, having previously been awarded an injunction against NVIDIA by the District Court of Dusseldorf. Again, terms were not disclosed but the ruling upheld the strength of WiLAN's patents

<u>Current portfolio companies</u>

IRD was acquired on June 1, 2017 for $47.8M, and provides Intelligent Transportation Systems (ITS), managing traffic flow on more than 16,000 roads. Products and services include toll collections systems, traffic and bridge monitoring and its "Weigh-In-Motion" technologies which detect, classify and weigh vehicles at highway speeds. It is a lower margin but stable/high recurring business with annualized revenues and EBITDA of approximately $40m and $2.5m.

VIZIYA was acquired on May 4, 2017 for $30M, and sells equipment maintenance tracking software to large asset intensive companies such as oil & gas, mining and heavy metals industries, with 55,000 users at 850 sites. The software is integrated into major ERP systems sold by providers such has Oracle, SAP, and IBM, and provides functions such as maintenance scheduling, maintenance budgeting, warranty tracking and analytics (to track cost control, compliance etc.). It is a higher margin business with annualized revenues and EBITDA of approximately $12m and $3.5m.

<u>CEO background and acquisition strategy</u>

Doug Parker is highly articulate in both written MD&A submissions and presentations (unfortunately the webcast of his Needham conference presentation in January 2019 where I first heard of the company has expired), and he details a plan to build a sustainable M&A ecosystem, with disciplined acquisition process, very much based on the Constellation Software and OpenText models. CSU has delivered a 38% compounded annual return since its initial public offering in 2006, while OTEX has compounded at 14% per year for over 20 years. Quarterhill is focused on $5m-$20m recurring revenue software businesses with high customer retention and predictable

cash flows, which allows for prudent use of acquisition debt financing. Quarterhill targets 15-20% ROIC, and employs a distributed management model, with the heads of business units given wide autonomy, but with head office reserving the right to step in when needed (as evidenced by recent cost structure reductions at portfolio company IRD), and a centralized capital allocation function.

While serving as Senior Vice President, Corporate Development at OpenText, Doug Parker lead a 21-person team that completed several deals of various sizes, where he had direct, hands-on involvement from signing Letters of Intent, to full integration, to operational improvement, the success of which determined his compensation. Deals include Daegis Inc. ($13.5m, October2015), Actuate Corporation ($330m, January 2015), Informative Graphics Corporation ($35m, January 2015), GXS Group, Inc. ($1.08bn, 2014), ANXeBusiness Corporation ($100m, May 2016), Recommind, Inc. ($163m, June 2016), certain customer experience assets ($170m, May 2016) and customer communications management assets ($315m, June 2016) from HP Inc., and the purchase of Dell-EMC's ECD division ($1.63bn, January 2017).

While Mr. Parker was hired to Quarterhill in December 2017, he is yet to do his first deal (the two existing portfolio companies IRD and VIZIYA, were acquired before he joined), sighting high valuations in a "sellers' market". My sense is he knows he has one shot at creating a favorable impression of his M&A execution skills and is keen to get his first deal right, in terms of both quality of the business acquired and price paid. To quote "We feel the sense of urgency, but we need to stay disciplined with our criteria. I'd rather spend less on acquisitions, to tick the boxes from our playbook perspective, than do a large deal just for the sake of doing a large deal. I think the discipline is key, if you're an aggregator."

The approach, which is sensible, is to focus on a number of verticals in which the company already has expertise and contacts, primarily Enterprise Software and Intelligent Systems. Vertical software solves specific problems unique to the industries they serve, earning higher margins than their horizontal comparatives, and once established, tend to have very strong switching costs given their usefulness and integration in customers workflows. While ultimately "money talks" in terms of securing an acquisition from a business owner, Quarterhill has a credible positioning as a friendly platform giving business owners an alternative to Private Equity, emphasizing a platform for long term partnership, and autonomous management vs 5-year slash and flip. As of Q4 2018, the deal pipeline activity consisted of reviewing 94 opportunities, 85 teasers, and entering into 27 NDAs to assess acquisition targets.

In the mean time, it is notable that he has cut costs at subsidiaries (by approximately $6 million), and overhauled senior management compensation to align with share price appreciation. Short term cash incentives were limited to 20% of total comp, Restricted Stock Units were eliminated, and Long Term incentives will be in the form of Performance Stock Units (e.g. 40% of total CEO compensation) that convert into common shares in equal installments over 5 years provided the share price increases by 10% each year, with an 8 year hold period, and Stock Options (20% of total CEO comp). While this is not quite the investor "gold standard" of open market stock purchases by insiders, longer-term alignment with the share price is still meaningful.

As we find ourselves potentially in the latter stages of a bull market, one would expect that Quarterhill would be a beneficiary of any protracted market dislocation that might reset business owners' valuation expectations. Ultimately, should the CEO fail to realize his vision, the company could return the $70m of cash to investors, and find a buyer for WiLAN. Investors buying Quarterhill at today's prices would likely still end up ahead.

Valuation:

- WiLAN: $125m
  - Normalized EBITDA of $25m (midpoint between $13.5m LTM and $40m 10-year average).
  - Apply 5x multiple (given volatility)
- Free Cash = approx. $50m ($70m less $20m required for working capital requirement)
- IRD and VIZIYA at acquisition costs = $78m
- Total = **$253m**
- Compared to $126m market capitalization

Scenarios/catalysts:

The set-up is attractive as most scenarios lead to a very favorable result, and we do not have to try to predict the future:

1. Quarterhill successfully deploys the cash balance to make a transformational acquisition. Assuming ROIC targets of 15-20%, and further assuming working capital needs of approx. $20m, Quarterhill has $50m with which to buy $7.5m-$10m of cash flows. Given the goal is to buy stable cash flow generative businesses, there is the opportunity for prudent use of debt to increase the size of the acquisition. Likely positive market reaction. Launch of repeatable acquisition strategy with potential for long term compounding
2. More likely, Quarterhill completes smaller bolt-on acquisitions in the Enterprise Software or Intelligent Systems verticals. Likely moderate positive market reaction. Launch of repeatable acquisition strategy with potential for long term compounding
3. Quarterhill receives $10m-$80m in damages from its Apple case. This is material relative to the size of the company and is not factored into the price. Likely positive market reaction
4. No transaction. WiLAN continues to produce irregular, though positive cash flows. Historic pattern is the share price rallies, albeit temporarily, on announcement of large $ deal. Yet gives investors opportunity to exit at a (potentially meaningful) profit
5. No transaction. Quarterhill gives up. In which case $70m dividend back to shareholders and WiLAN put up for sale. Drawn out, but likely ultimately profitable conclusion

Risks

1. Company, under time pressure to do something, makes a value destructive deal. While entirely possible, less likely given focus, discipline and prior deal experience
2. Patent business does not sign lucrative deals, legal environment continues to be more hostile towards these types of businesses. Mitigated by recent judgments in Germany, new terms with NVIDIA and SK Hynix
3. Nothing happens – neither a deal is done (prices remain high, too many buyers looking to make SAAS deals), nor capital returned to shareholders. Stock becomes dead money

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