

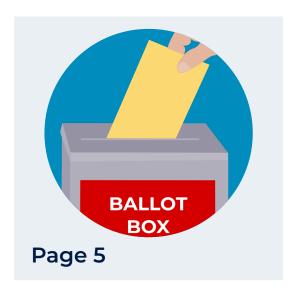
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CONTENTS

- 2 Letter from the Editor
- Kaleo & Qatalyst Portfolios
- 4 iA Protected Interests Model
- **5** Elections and Markets
- The Need for Social Impact: Filling the Gap Through Investment!
- Same Principles, New Application: Exploring the Value of Private Equity
- 16 Lam Research: A Rare Case
- 19 Qube Insights: Kaleo Holdings
- **21** Traffic Lights: Equity Research









Letter From The Editor lan Quigley

As 2019 came to a close, we captured a fantastic year of investing (pushing 20% returns on all of our models) making up for a poor 2018 and holding our long-term results above 12% annualized. I am proud of our research team and the ongoing improvement and energy in our discovery process.

This edition of our "Qube Commentary" includes submissions and articles from five of our team members. Noah discusses the upcoming US election and its possible impact (or not) on the financial markets, Sarah reviews our new social impact fund launching this month and Michael our private equity pilot planned for 2020. Later in the edition, Nick (one of our student analysts) discusses an exciting stock that he discovered and successfully pitched to our portfolio steering committee (Lam Research) and Patrick discusses Saputo and Blackberry, two holdings in our equity models. It is my privilege as the team lead to work with such curious and talented people.

By way of an update, Qube has decided to remain in its current location, but to expand with major renovations starting this spring to our building. If you have not met Sarah Anderson, she is our newest staff addition and will be joining Noah and Michael on the Investment Counselling team. She is a candidate in the CFA Level 2 exam this summer and joins eight Qube team members all writing finance exams in May/June; six are writing CFA exams and two CIM exams. I myself will try to (finally) finish the CFA program by writing the Level 3 exam. I wish all of our team well in their studies and good luck with the exams.



I hope you enjoy this edition. I also want to thank-you for your support of our work at Qube. It is our privilege to serve your wealth management needs in 2020 and beyond.

Ian Quigley, MBA Senior Portfolio Manager

Kaleo & Qatalyst Portfolios: Past Performance

	2019	2018	3-Year	5-Year	Inception
Kaleo A	20.2%	-1.9%	10.3%	9.7%	12.6%
Kaleo Full	19.6%	-0.5%	11.8%	11.1%	13.5%
Kaleo Benchmark	22.2%	-4.9%	8.9%	8.7%	9.1%
Qatalyst	31.7%	-19.7%	7.6%		7.3%
Qatalyst Benchmark	24.1%	-2.5%	10.3%		11.4%

Note: All returns reported above for periods in excess of 1-year are reported as annualized returns. Composite returns represent past performance and should not to be treated as an indication of future results. All returns are reported as net of trading costs, but do not account for management expense fees. All rates reported above correspond to the period ending December 31, 2019. Kaleo inception of January 2011 and Qatalyst inception of Jan 2016.

Kaleo

Kaleo consists of a portfolio of stocks that are selected using an investment approach that applies company-specific fundamental analysis, and strategic macroeconomic positioning. The model invests in a mix of both domestic and international equities, with geographic weighting subject to change intermittently.

Our Kaleo Full model is composed of 35 stocks + 5 index ETFs. For clients with invested funds in the \$250K to \$1M range, we offer a subset 22 stocks + 5 index ETFs subset of this model (Kaleo A) in order to reduce brokerage fees. Returns since inception for each of our Kaleo models are similar by design.

We currently aim to hold a stock for 3-5 years in our Kaleo models. This means that we have an average portfolio turnover of 25%.

We purposefully chose our benchmark to more accurately represent the broad geographic diversification of our holdings in Kaleo. Our benchmark for Kaleo is defined as 50% of the S&P 500 Total Return Index (in CAD) and 50% of the S&P TSX Total Return Index.

Qatalyst

Qatalyst consists of a portfolio of stocks we believe to represent the best opportunity for positive returns within a 3-5 year investment horizon, regardless of short-term volatility. Companies are selected using an investment thesis that primarily includes the realization of a catalyst.

Qatalyst is a concentrated portfolio, oftentimes consisting of between 10 and 20 stocks. While we aim to offer diversification amongst various market and geographic sectors, it is not assured.

Due to the less conservative nature of the portfolio, clients are encouraged to also hold a mixture of fixed income investments, as well as our more diversified and less concentrated Kaleo model in order to moderate and match investor specific tolerance for risk.

The S&P 500 (currency adjusted) is applied as our benchmark for Qatalyst due to the higher relative concentration of US companies held in this model.

iA Fund Model: Past Performance

	Allocation	YTD	2018	3-Year	5-Year	10-Year
iA Dividend Growth	20%	18.2%	-7.9%	5.1%	5.4%	6.3%
Fidelity NorthStar	10%	4.2%	-5.8%	0.5%	4.1%	7.9%
Dynamic Global Dividend	30%	22.8%	4.2%	15.7%	13.3%	N/A
BlackRock Int'l Equity	10%	13.0%	-8.4%	5.7 %	5.4%	5.1%
BlackRock US Equity	30%	20.7%	1.2%	10.2%	10.5%	12.3%
Equity Portfolio		18.5%	-1.7%	9.0%	8.8%	7.0%
Bond Portfolio		5.2%	-0.3%	1.8%	1.5%	2.4%

Note: All returns reported above for periods in excess of 1-year are reported as annualized returns. Composite returns represent past performance and should not to be treated as an indication of future results. All rates referenced above correspond to the period ending December 31, 2019.



Qube Investment Management has over 15 years experience in managing both Individual and Group Savings fund models.

In our search for a carrier that met our high expectations, we decided upon Industrial Alliance Financial Group, which leads the pack in providing accessible, user-friendly and cost-efficient investment and retirement tools to their plan members. Through iA, individual investors have access to best in class 3rd party funds and institutional portfolio managers that are typically unavailable to retail investors.

Protected Interests Model

In contrast to the direct-stock-holding portfolios that we manage, for which we have sole discretion, when it comes to the selection of equity holdings, our Seg-Fund models invest in fund managers contracted by iA. That is to say that while we choose which managed funds are included in our Protected Interest Model, we have no say in the specific holdings of these funds. As a result, our research must focus on evaluating each fund manager, based on their past performance, their investment strategy and their macro positioning.

Our 'Protected Interests' model was launched at the beginning of 2005. It has consistently added value for investors: A fact which we attribute to the well diversified set of fund assets that we choose to hold, as well as the active style of management that we provide.

Elections and Markets

By Noah Clarke

As the election season heats up, investors should think twice about making changes to their portfolios purely in response to polling results.

While presidential elections do have influence, the stock market is a complex system that cannot be predicted by election platforms and presumed presidential front-runners. Indeed, if there is any semblance of causality, it likely runs the other way, with electoral success being positively affected by market conditions in the run-up to an election.

Nonetheless, during each election year, the same old market prognostications are recycled. Two months out from the 2012 election, Bloomberg published a survey in which nearly 50% of respondents answered that the market would drop in the event Obama was re-elected. They were wrong. Then, in an article entitled, "Trump Fallout," Nobel Laureate, Paul Krugman wrote that the market would never recover under Donald Trump. We know this to also be untrue.

Now, we see headlines such as,

"Investors See Market Plunge if Warren Wins in 2020"

"US Market Will Go Haywire if Trump Loses 2020."



I would advise taking these most recent warnings with a large grain of salt. This type of analysis has an abysmal track record. For the most part, a number of the more common bases of these predictions are reviewed and debunked.

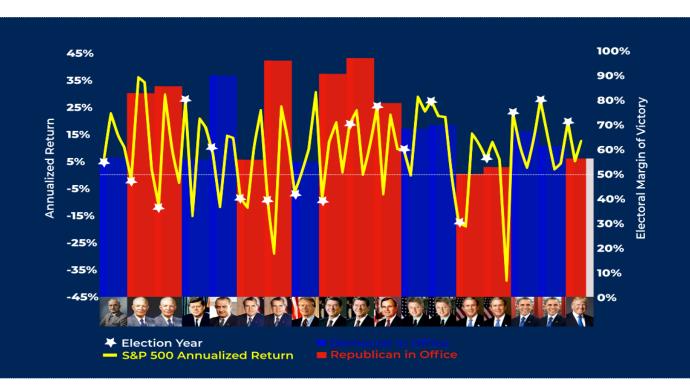
Republicans and Democrats

Would one have a straightforward decision to make if he or she considered the 2020 election from a position of indifference, caring only for how markets fare in the election of a Democrat vs. a Republican? Based on history, the answer is no. There isn't any conclusive statistical evidence suggesting that either party is notably better for U.S. equity market returns. Candidates' actions do not always coincide with their party's traditional views, making it difficult to determine whether Democratic or Republican presidents are better for the economy.

For instance, Bill Clinton cut taxes, reformed welfare, championed the North American Free Trade Agreement, declared that the era of big government was over, and worked with congressional Republicans to deliver a balanced budget.

Donald Trump has also crossed traditional party-lines numerous times. During his first term, Trump restricted free-trade, cut deals to expand government spending, and unilaterally implemented a farm bailout that has already cost taxpayers more than twice as much as Obama's auto bailout. Most importantly, though, regardless of which party holds power in Washington, their impact on the economy often takes a back seat to ongoing cyclical trends.

Historically, average annualized returns have reported slightly higher under Democrats. Economists Alan Blinder and Mark Watson — both titans in their discipline — tested an extensive list of possible causal factors to try and explain the trend. Nothing, however, seemed to fit either way. In the end, they attributed the Democrats' out-performance to luck. In which case, Trump was actually on point when he suggested to Wolf Blitzerback in 2004 that, "It just seems that the economy does better under the Democrats than the Republicans. *Now, it shouldn't be that way.* But if you go back, I mean it just seems that the economy does better under the Democrats." Fundamental factors, such as interest rates, corporate earnings, and exogenous shocks (wars and natural disasters), often influence markets to a greater extent during the electoral cycle than the election. At about 3% average annual returns under the Democrats' leadership, normal variations, caused by fundamental factors, in yearly stock market returns, far exceed any party differences.



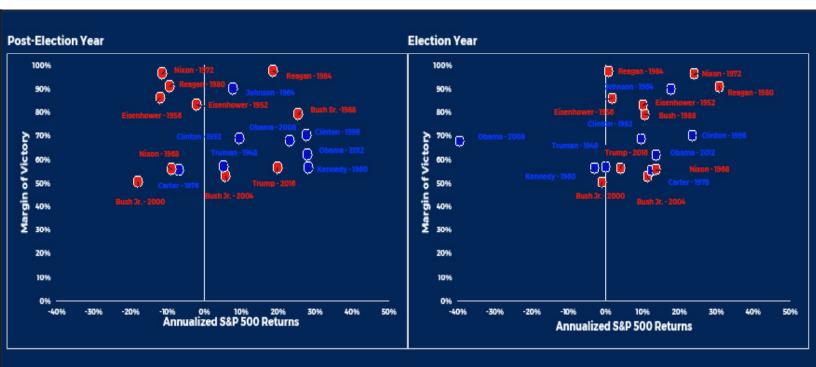
Not to mention that in a global economy (the S&P 500 generates more than 50% of its revenues outside the U.S.). The actions of any one government are less critical — especially over only four years.

Leadership Continuity & Clear Front-Runners:

Above all else, investors often crave predictability. Therefore, it would be reasonable to assume markets perform better when incumbent presidents are re-elected, given the provided continuity. At first glance, this argument appears to hold water. After all, going back to 1900, the Dow Jones Industrial Average gained an average of 15.3% in years when the incumbent president won re-election but decreased by an average of 4.4% when the incumbent lost. Over the same period, however, only five incumbent presidents have lost re-election.

In each instance (Taft, Hoover, Ford, Carter, and Bush Sr.), the incumbent presided over a struggling economy – the reason for their eventual defeat. The election results appeared more likely the product rather than the cause of weak market conditions.

If stock market returns were affected by leadership continuity, it would follow that we might find a positive correlation between the margin of victory and annualized returns. After all, a clear front-runner incumbent or otherwise would tend to reduce uncertainty. As shown in the graph below, however, higher predictability has not necessarily translated with higher relative returns in either the election or following year. The correlation is quite weak (slightly positive in election years and somewhat negative in post-election years).



In particular, we can see that although Reagan was assured victory in the run-up to the 1980 and 1984 elections, capturing at least 90% of the vote in both polls, market returns varied both during and after his election years. Clearly, there are more critical uncertainties that get priced in by markets.

Election Promises

Leading up to each election, presidential candidates stage their platforms using campaign promises designed to sway voters' opinions. Some political promises are difficult to quantify, while others are more direct and accountable. What a candidate promises (or doesn't) is scrutinized for clues as to their likely impact on specific assets.

More often than not, this can lead to short-run bouts of volatility; but as we noticed, during the last election, this type of analysis may be more within the realm of short-term market timing – a practice with too little reward to offset the risks. It takes time to understand what realized policies mean for company earnings. Smart money doesn't jump into select stocks and sectors based on preconceptions.

During the 2016 election, infrastructure spending was a hallmark of Trump's campaign. Trump promised that he would spend twice as much as Hilary Clinton on rebuilding the country's infrastructure. In fact, this was the only campaign pledge he mentioned in his acceptance speech stating, "We are going to fix our inner cities and rebuild our highways, bridges, tunnels, airports, schools, hospitals." Mr Trump promised America's infrastructure would become "second to none."

Stocks of companies that build and benefit from infrastructure rallied in response, with the NYSE American Steel Index posting gains of 32% in the final month and a half of the year. Infrastructure, however, never took off as hoped. As a result, stocks languished since the post-election rally. The NYSE American Steel Index has remained flat over the past two years. An investor would be 22.9% richer today if he or she invested in the S&P 500 on election night versus buying into the steel hype.

In the three years following Trump's election, the same sectors that did well during Obama's second term have continued to perform well. Following the 2016 election, pundits were quick to point to industries like defense and banking as significant beneficiaries of Trump's proposed legislation. While they weren't wrong, predicting impressive returns (92% and 53% cumulative returns for the respective industry indexes), their measure merely keeps pace with cumulative industry returns during Obama's second term. The 2016 election did not appear to hurt their prospects – but neither did it seem to boost them. Instead, longer-term trends were the deciding factor.

At the same time, headlines focused on Trump's varied beefs with major tech companies, including Amazon, Facebook, and Google. Sam Nunberg, a senior adviser to Trump's election campaign, was quoted as saying that: "Amazon, Google, and Facebook are essentially monopolies in different sectors. The president does not like monopolies – he likes competition."



This stance caused fear on Wall Street in 2016 and is doing so again with Elizabeth Warren as its new champion. Last time around, it was a nonstarter. It is unclear if the same will hold in 2020. Certainly, since 2016, those investors who avoided the FAANGs due to Trump's election provocations are currently kicking themselves.

To Sum It Up

Both investors and journalists enjoy the narrative that comes from mixing politics with stock markets. But like the Democrats and Republicans, stock markets and politics don't mesh on fundamental principles. The problem with investing based on such premises and patterns is that it's an emotional rather than a rational way to make investment decisions.

Of course, it will always be appealing to subscribe to the belief, as many have, that there's a formula for making predictable, over-sized returns. But so long as headlines continue to show up in the wake of an election stating that so and so (see George Soros) incurred significant losses having made an investment decision based on an election outcome, I will remain a fervent skeptic. It will inevitably prove to be the case that investing with an acute awareness of the risk and return trade-off, accounted for with adequate diversification, and a long term outlook, will prove to be the winning strategy.

The Need for Social Impact - Filling the Gap Through Investment

By Sarah Andersor

Is Social Impact Investing Just Profiting Off the Poor?

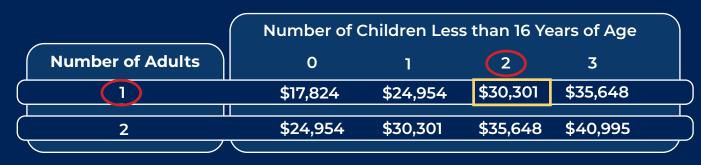
Such is a question to consider. It's been one that we, at Qube, have pondered through the last quarter. We knew we wanted to create an impact in our city and take a step further than the socially responsible equity investing we have been doing since the beginning, but how? Philanthropy can be a sensitive area to enter, let alone trying to invest with the same 'do-good' principles.

We first needed to figure out where to help. It was a challenge to determine the real needs of Edmonton from our position. Society often paints the less fortunate with the same one-toned brush. There appears to be a fixed amount of variables that could cause someone to fall into the pit of poverty.

No job, no family, the few that come to mind stand at intersections with a cardboard sign. Sadly, it pains us to admit that those are the few that Qube does not have the resources to impact. But research has led us to conclude that it's not only the few at intersections. Many of the less fortunate have families and jobs. Actually, they have full time jobs that pay at or above Alberta's Minimum Wage. Below is the Alberta After-Tax Low-Income Threshold (AT-LIM).

Let me draw your attention to \$30,301, the AT-LIM threshold for a single parent of two. To illustrate, let's call them Mary, a single-mom of two boys under 10. Mary's after-tax income translates to approximately \$37,500 a year before-tax. Assuming a standard 37.5 hour week, Mary is making \$19.23 an hour. In 2015, minimum wage was only \$11.20 and today it is only \$15.00 an hour.

Alberta After-Tax Low-Income Threshold (AT-LIM)



(Statistics Canada, 2015)



This gives Mary around \$2,525 a month after-tax for living expenses.

Mary's Monthly Expenses



After these basic necessities, Mary has \$57.00 a week for clothing, savings, field trips, school supplies, a coffee in the morning. Tickets alone to take the kids to see Frozen II is \$39.00.

But that's not the most shocking part.

105, 978 people live under those low-income thresholds in Edmonton alone. That is 10.8%, **1 in every 10 people** you see walking down the street.

There are **9,705** lone-parent low-income families in Edmonton, and 85% of those are women-led, like Mary's family.

This is the population that our investors can help; the families or individuals struggling through economic hardship who need a leg-up. A professor from the University of Alberta, Omar Yaqub, took time to speak with our team about how to create a positive impact in our city. His advice? Stick to what we know best.

Qube mentors, counsels, and services hard-working Albertans to find the best way to maximize their financial position. Let's find it for the people who need it most, and let's make a return while were doing it.

Here is Our Plan:

- We will give 30% back to Mary and other low-income Edmontonians through affordable housing.
- Qube will purchase a set of properties and commit to keeping the rental rates 30% below market for the next decade.



The return to investors will be generated from the project through property appreciation, as we undergo volunteer-run suite renovations. Conservative returns have been projected by our team at Qube, and we are estimating a **3.23% return** over the decade after liquidation, comparable to a Government of Canada bond yield of 1.54%.



The investment is the property, the impact is the increase in quality of life that another 30% could give to Mary. She could save just over \$5,400 a year with this rental subsidy. That provides her room to breathe, organized sports for the boys, or a car payment.

We believe that this project is the start of something that can be replicated, grown, and used to change the affordable housing landscape in Edmonton. There are over 18,000 people on waitlists for government subsidized (GS) housing in Edmonton. Mary and her boys would be placed on that waitlist; eligibility grading for GS housing considers a lot of low-income families and individuals as 'not poor enough'. This is no fault of the government, as there is only so much funding. But, if we can fill the gap and create housing for the economically burdened, we can help free up government housing for those who need more than financial savings.

As we decide to enter into world of Social Impact Investing, it brings us back to the original question: is Qube profiting off the less fortunate? We don't think so. The project's success is not contingent on the well-being of the working underprivileged, its merely a supplemental benefit. We are entering this project with sensitive hearts and sensitive hands. If by investing in a property we can create a home and community for those who need it, we are all in. Are you?

If you're interested in becoming a part of the project, please contact Sarah at sarah@qubeinvest.ca.

Same Principles, New Application: Exploring the Value of Private Equity

By Michael Baker, MBA



About Michael

Michael completed his Masters of Business Administration at the University of Alberta in 2018. His focus was on Innovation and Entrepreneurship, specifically how to grow businesses. Michael came to Qube in 2019 after working for 4 years in another operations role as well as working in the non-profit sector. He oversees the operations of Qube as well as works in client service and our Private Equity fund.

Our Investment Approach

As investors, we aim to look for and find value for our clients. At Qube, we base our investments on the principle of Value Investing, and the academic principles taught in the Chartered Financial Analyst designation. We look for companies that, based on our analysis, are undervalued by the market. In public markets, we found investing in and holding blue-chip companies to be successful. Each year, based on our research universe, we know that opportunities are awaiting our research team to discover.

Traditionally, these awaiting opportunities have remained in public markets. Our focus is and will always be finding value in the stock market. However, considering Qube's growth, we asked ourselves, can we apply our rules and methods of investing elsewhere? How can we access value outside of the public market for our clients? These questions led us down a road to new opportunities, namely, private equity.

The term private equity may conjure different images. One may think of alternative investments beyond stocks and bonds, such as venture capital (investing in start-up companies), buying companies, or real-estate. What private equity offers investors is the chance to diversify investments. An alternative investment that is quite common is purchasing a rental property. We do not consider this private equity; instead, we view private equity as deploying capital outside of the public stock market.

Deploying money outside of the stock market, in addition to diversifying investments, enables an investor to seek out the potential for higher returns, which can come at the sake of liquidity. We're avid proponents of the stock market because it allows an investor the opportunity to own a part of a company while still retaining the right to buy and sell their interest as needed (offering fairly easy liquidity).

Any client of Qube can call us if they need access to their investments, and we can transfer the money, so it is in their bank account in two days. This liquidity, coupled with the possible growth of principal, is unparalleled outside of the market. However, there comes a time when it may be beneficial to sacrifice liquidity for the opportunity of enhanced returns.

Although high numbers, after one-to-two million in the stock market, there are no longer liquidity concerns for most investors. If one has over a million or two in the market, he or she has likely maxed out RRSPs and TFSAs. These registered accounts are designed to be savings mechanisms to provide you the money expected to last you through retirement.

If you're fortunate to be in a place where you're investing in non-registered accounts, you've already taken advantage of the tax benefits. At this time, alternative investments may be the right move. Your capital gains will be taxed the same way in non-registered accounts. The potential for risk-adjusted higher returns may be the right choice.

If you decide to invest in private equity, first consider the factors for how investments differ from market investments. Should liquidity not be an issue, one potential benefit is that private equity investments are less correlated to stock and bond investments. If we continue with the example of purchasing a rental property, when you buy a rental property, generally, your investment is not readily convertible to cash. At the sacrifice of liquidity, once you have your renters in place (assuming

they are good tenants), you have a source of monthly income from the property that is secured regardless of whether the stock market goes up or down.

An alternative investment is a hedge against the inherent volatility of the stock market. Similarly, to how we spread out risk and correlation in your portfolio by purchasing an array of stocks, an alternative investment now distributes your portfolio into another asset class. Diversifying risk is a sound investment principle.

So why is Qube venturing into private equity? It's because now is the right time to apply our valuation expertise to investments outside the markets.

We fundamentally believe that private markets have sound investments. Many good companies choose to stay private rather than raise capital by going public. Local examples include Booster Juice, Katz Group, or PCL Construction. This trend also extends to even larger companies. Some of the most notable are Koch Industries, with sales of an estimated \$117B, Cargill \$115B, or S.C. Johnson & Son \$10B.

Although these companies' names may not be familiar, we likely use one of their products every day. Brands they own include Dixie cups, Purina Dog Food, and Ziploc. These companies are profitable but chose to stay private where they can manage their growth.

^{*}S&P500 annualized return 1928-2016

They can ride out bad years and take advantage of the good. In the public market, these actions are less feasible.

As aforementioned, alternative investments can provide enhanced risk-adjusted returns for investors. Since March 9th, 2009, the S&P 500 has been in a bull market with the longest bull run in history, offering an annualized return of 12.8% (3% higher than the historical average of 9.8%*). In McKinsey & Companies' annual review of the global private market, they compare the quartile returns of US equity mutual funds to those of private equity.

The top quartile of mutual funds returned 10-12% between 2013-18, slightly ahead of the S&P 500. Whereas, the top quartile of Private Equity funds returned 23-48% a two to four times greater return. If the public market does not require liquidity, private market returns can be substantial.

Private equity can also be of benefit to private companies, providing operational flexibility. Many mature companies become private equity funded to undergo a structural change. There are many well-known companies owned by private equity firms that may be surprising. Clover Leaf Seafood, K2 Sports, PetSmart, Toys R' Us, and Safeway are all held by Private Equity firms, each purchased for different reasons.

With private support, companies can pursue a transformative change to revitalize and grow once again — for example, PetSmart. Under private equity ownership, Pet Smart was able to change its operations to create efficiencies.

These improvements contributed to a 38% dividend returned to the private equity fund shareholders after one year. Since, with the excess capital, Pet Smart embarked on an acquisition spree, buying out competitors and diversifying from their retail in-store presence. These acquisitions further provide value to both the private owners and the business. We want to do the same with Qube Private Equity.

We are looking to purchase and provide value to companies located in Alberta, not tied only to oil and gas, where their owners are ready to retire and require an exit. Our objective is to evaluate businesses that have consistent cash flows and defined business segments. We believe we can add value by discovering efficiencies and taking companies to the next stage of growth. We will reap the rewards for our investors, either by selling to a larger firm or controlling a more substantial business than we bought. We will bring on key personnel who are experienced and share our vision for the business' future.

At Qube, we plan to seize new opportunities. As we celebrate 20 years, we know we have shown the value of pubic markets to our clients. Our next ambition is to extend our offering by diversifying risk and providing value by tapping into the private sphere.

Lam Research: A Rare Case

By Nick Riemer

According to research from McKinsey, average companies in great industries tend to outperform great companies in poor industries. Kaleo's newest holding, Lam Research, is the rare case of a great company performing in a great industry.

Lam Research was purchased at the end of last September for an average cost of \$239USD/share. During the time of writing, the company's stock is trading at \$270USD/share, which translates to a 13% return for our clients over 2 months.

Some Background

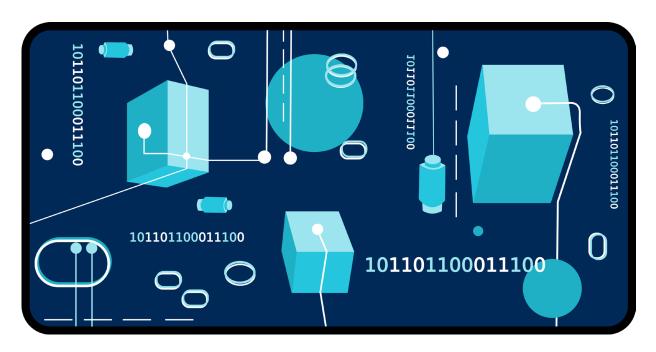
Lam Research is part of the Semiconductor Capital Equipment industry. They are one of the few companies that produce the equipment required to manufacture semiconductors. In essence, semiconductors

are the building blocks for computer chips found in items you use daily: smart phones, modern-day vehicles, televisions, essentially, any item that requires an electronic circuit.

In 2018, global semiconductor sales hit nearly \$480USD billion, which is equivalent to 29% of Canada's GDP. Lam research does not operate in the semiconductor industry directly; however, Lam's performance is still highly dependent on this industry's performance — no one will buy their equipment if no one is buying semiconductors! Great news for current investors as the industry is booming.

Outperforming the S&P 500

The Semiconductor Capital Equipment industry has managed to outperform the S&P 500 significantly. To provide context, the S&P 500 and the Semiconductor To provide context, the S&P 500 and the



Semiconductor Cap11% and 23% annual returns respectively over the last five years. Outperforming the S&P 500 is the holiest of holy grails when investing in the US stock market. Our analyst team was quickly intrigued by this industry.

How was this Possible?

The Semiconductor Capital Equipment industry's growth is driven by what's called Industry 4.0. Remember the Industrial revolution? We believe this will have similar ramifications but with modern-day technology.

Industry 4.0 will continue to be driven by greater demand across electronic devices such as smart-phones, data-center expansion, autonomous driving, and growing artificial intelligence applications. Given the Semiconductor industry's rapid growth from these applications, the demand for manufacturing equipment has increased in tandem, helping to drive outperforming returns.

Lam Research Investigation

Our analyst team was astonished by the highly consolidated nature of the Semiconductor Capital Equipment industry. Four companies constitute the majority of the market, which made determining the best company relatively feasible in contrast to most markets. Based on our pre-screening models, Lam Research exhibited significant potential.

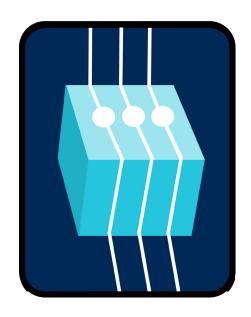
To be considered for investment in Kaleo, however, the company first had to pass four stages: Financial, Valuation, Qualitative, and Growth.

Unconventional Financials

Diving into the financials of a company can be frightening. They either captivate your attention or out-right scare you away from the company. Lam's financials were impeccable: they captivated us. Lam managed to grow sales and earnings at double-digit rates over the last eight years — a rare phenomenon in large-cap companies. When conducting further financial analysis, the company excelled at nearly every test, measurement, and relative comparison that our analyst team threw at it.

Irrational Valuation

A company's valuation gives analysts clarity; it enables them to understand if the stock price is rational or irrational. An oceanside property in Hawaii may look appealing, but when its multi-million-dollar price tag is revealed, it quickly becomes less attractive. Stocks work the same way. You may find the best business in the world, but its stock may be irrationally overvalued — or hopefully — undervalued.



Our analysts ran Lam's stock through a variety of vigorous pricing models and methods, each concluding the stock was significantly undervalued based on various measurements of shareholder value. Time to ring the goal horn: we found a business whose financials are robust, for boxing-day prices!

• The Qualitative Journey

Our research revealed that Lam has developed and integrated a unique technology within their equipment: quad-station module. QSM is unparalleled to other legacy technologies as it enables the highest footprint productivity among the entire industry. As a result, Lam is the market-leading supplier for manufacturing equipment used to produce 3D NAND — fancy computer talk for an innovative component required in modern-day electronic devices. Semiconductor manufacturers purchase equipment on a "best of breed" basis; all 3D NAND manufacturers are Lam's customers, further supporting our research that there is something superior about Lam's product offering.

Lastly, we needed to ensure management was capable of sustaining Lam's historical growth. Tim Archer was appointed as CEO last year and immediately publicized impressive sales and earnings growth targets for a 3-year time horizon that were aligned with past performance.

Before being appointed CEO, Tim served as Lam's COO since 2012, and, in total, has accumulated over two decades of experience in this industry through a multitude of leadership roles in a variety of companies. During his short-time as

Lam's CEO, he has curated a remarkable track-record by generating near triple-digit returns for shareholders. Post-investigation, our analyst team became confident in his ability to execute effectively on behalf of investors.

Irrational Valuation

Until this point, we based each stage described on historical data. While this type of investigation is crucial, a stock is only as good as its future cash flows. What drives this company's investment thesis is a higher demand for semiconductor equipment, attributable to industry 4.0 applications. Due to Lam's distinct competitive advantage in the industry, we believe they are highly likely to benefit from these industry-wide tailwinds. Further, yearover-year revenue growth has enabled increased research and development spending; this aids the company in maintaining its continual position as an industry-leading semiconductor equipment manufacturer. The future looks bright for Lam!

Staying on Course

While initiating a position in a company is an in-depth and time-consuming process, it is only half the battle. Qube starts an investment with the intention of holding that particular company for a 3-5 year time period; therefore, continuing to monitor Lam's performance is crucial for creating ensuring success. Lam Research has already generated a 13% return for our clients over the last 2 months. but the stock remains undervalued based on our financial modeling. As with all our positions, Qube will continue to monitor the fundamentals and narrative of Lam Research. Once we believe the stock has reached our calculated price target, we may reconsider our thesis or realize our gains.

Qube Insights: Kaleo Holdings

By Patrick Choi

Saputo

Kaleo A, Full **Saputo (SAPTO):** We first bought Saputo in our Kaleo portfolios on Oct 13, 2017, for \$44.26 CAD. Since, the company produced a total, cumulative return on investment of approximately negative 5.9%, including dividends, on a constant currency basis. Given the ongoing macro challenges, the negative performance so far was better than feared — the reader only needs to flip the page, and read our take on BlackBerry, to see how far the share price of a company could potentially deteriorate when faced with headwinds to their business. We believe the better-than-feared performance is attributable to Saputo's dependable business model and is one of the core reasons we initially invested in the company.

Saputo is a Canadian company that produces, markets, and distributes a variety of dairy products, including cheese, fluid milk, extended shelf-life milk, and cream products. They are one of the top 10 dairy processors in the world, with products sold in over 50 countries. Some of their more well-known brands sold in Canada include Alexis De Portneuf, Dairyland, Joyya, Milk2Go, and Saputo. It is important to mention that Saputo is a dairy processor. They own neither farms nor cows. Instead, Saputo buys milk from farms; processors them into cheese, yogurt, and other items; packages these items into sellable products; and then distributes these products to retailers and other outlets.

Saputo was on a tear in the first half of 2019, returning 17% to investors at the top of the range. Since then, the stock gave it all back after its quarterly announcement in June. During the conference call, management highlighted the challenges they were facing in navigating the global trade tariffs: higher warehousing, logistics, and transportation costs, as well as lower sales volume due to higher competitive pressures. Saputo's challenges are macro. The only thing they can do is mitigate obstacles as best possible until the tide turns. The limited downside experienced so far speaks to their effectiveness in reducing these headwinds.

An indication of changing tides appeared in Saputo's earnings call in November, which cited waning competitive pressures, further increases in end-market selling prices, and declining warehousing and logistics costs. As a result, the stock price jumped up 5% that day.

Over a longer time horizon, we can look forward to further efficiencies and growth from their consolidation of recent acquisitions and continued global expansion. On the macro side, Saputo should also stand to benefit from stricter government quotas and reduced production levels from competitors. Additionally, the Organization for Economic Co-operation and Development (OECD) predicts that there will be a growing demand for dairy imports in China and the Middle East, which should directly benefit Saputo's Australia division. We believe there is room for further growth in the company's stock price in the next 3-5 years.

Qube Insights: Kaleo Holdings



Kaleo A, Full

BlackBerry (BB): We first bought BlackBerry in our Kaleo portfolios on Apr 20, 2015, at a price of \$12.23 CAD. Since, the company has produced a total, cumulative return on investment of approximately negative 39%, as of Dec 11, 2019. While its had a rough five years, in our opinion, BB continues to be a misunderstood company with valuations supported by both underlying assets and future growth in cybersecurity. The market currently values BlackBerry at a market capitalization of \$3 billion USD. From their latest financials, assets subtracted by debt is approximately \$100 million USD. Let's round it to zero.

BlackBerry also recently purchased a company called Cylance, which deals in endpoint security and competes against CrowdStrike and Carbon Black. Cylance was purchased for \$1.4 billion USD in Feb of 2019, and is about the same size as Carbon Black, but smaller than CrowdStrike. In Oct of 2019, Carbon Black was acquired by VMware for \$2.1 billion USD. Let's be conservative and value Cylance at \$2.0 billion USD.

Additionally, BlackBerry owns approximately 37,000 worldwide patents and applications. While it is impossible to calculate a fair value on these assets, we know that BlackBerry's Licensing and IP segment generated annual revenues of \$286 million USD at the end of Feb 2019. This grew from \$196 million USD in 2018 and \$126 million USD in 2017. Additionally, BlackBerry has outstanding patent infringement lawsuits against Facebook, Twitter, and Snap (Snapchat). Given the above information, it's not unreasonable to value the patents at the residual value of at least \$1.0 billion USD.

The calculation above does not even factor in their main line of business in enterprise software, QNX, or Radar. Of particular note is their QNX segment, which should be generating increasing revenues as the deals with automakers from 3-5 years ago starts to translate into actual vehicle sales. BlackBerry's stock price recently cratered after announcing its Sept 2019 earnings. While the overall numbers were decent, especially in light of their valuations, the primary concern on the street was a weakness in their leading Enterprise Software and Services (ESS) business. This may have been due to distraction from the integration of Cylance, which should be close to completion. Once management can dedicate their full attention back to this business, we believe their base of government and regulated customers should provide a solid floor with which to compete against their competitors.

We continue to believe that BlackBerry's current valuations are compelling in light of their opportunities in the market. Furthermore, we think it is undeniable that cybersecurity will continue to be of paramount importance as increasingly more sensitive tasks become automated. BlackBerry's current challenge is in its execution, and we will continue to monitor its progress on this front.





Company	Sector	Current Status
Air Canada	Industrials	
Allegion Plc	Industrials	
Boeing CO/THE	Industrials	
Thomson Reuters Corp	Industrials	
CAE Inc	Industrials	
Canadian Pacific Railway Lt	t d Industrials	
Harris Corp	Industrials	
HD Supply Holdings Inc	Industrials	
Masco Corp	Industrials	
Brookfield Business PT- UNIT	Industrials	

Balancing traditional research techniques with modern portfolio science allows our team to find companies that demonstrate and maintain solid investing fundamentals. We look for less volatile and proven earnings combined with long-standing stable dividend policies. Share prices need to be justified on a combination of current earnings and reasonable earnings growth possibilities. Quality financial statements, coherent management and an operational business plan need to be in place before we rank a company "green."

Company	Sector	Current Status
Delta Air Lines Inc	Industrials	
Hunt (JB) Transport Svc Inc	Industrials	
Ametek Inc	Industrials	
Amerco	Industrials	
Dun & Bradstreet Corp	Industrials	
Bombardier Inc-B	Industrials	
Norfolk Southern	Industrials	
Match.com	Communication Services	
ANGI Home services	Communication Services	
APTIV Plc	Consumer Discretionary	
ARAMARK	Consumer Discretionary	
Ulta Beauty	Consumer Discretionary	
APACHE Corp	Energy	
Inter Pipeline	Energy	

Company	Sector	Current Status
AFLAC Inc	Financials	
ARES Capital Corp	Financials	
Apollo Global Management -A	Financials	
Brown & Brown Inc	Financials	
PNC Financial Service Group	Financials	
Reinsurance Group of America	Financials	
Commerce Bancshares Inc	Financials	
Franklin Resources Incs	Financials	
LPL Financial Holdings Inc	Financials	
Metlife Inc	Financials	
Moody's Corp	Financials	
Onex Corporation	Financials	
Power Corp of Canada	Financials	
Principal Financial Group	Financials	
Progressive Corp	Financials	

Company	Sector	Current Status
Prudential Financial Inc	Financials	
State Street Corp	Financials	
Synovus Financial Corp	Financials	
Santander Consumer USA HOLDI	Financials	
Great-West Lifeco Inc	Financials	
Unum Group	Financials	
Power Financial Corp	Financials	
US Bancorp	Financials	
Chubb	Financials	
Citigroup	Financials	
Abbvie Inc	Health Care	
Alkermes Plc	Health Care	
Allergan Plc	Health Care	
Bausch Health Cos Inc	Health Care	
Celgene Corp	Health Care	
Cerner Corp	Health Care	

Company	Sector	Current Status
CSV Health Corp	Health Care	
Jazz Pharmaceuticals Plc	Health Care	
Encompass Health Corp	Health Care	
Vertex Pharmaceuticals Inc	Health Care	
Indexx Laboratories Inc	Health Care	
Illumina Inc	Health Care	
Perrigo Co Plc	Health Care	
Quest Diagnostics Inc	Health Care	
Zoetis Inc	Health Care	
Teradyne Inc	Information Technology	
Jack Henry & Associates INC	Information Technology	
Nvidia Corporation	Information Technology	
CANFOR Corp	Materials	
CF Industries Holdings Inc	Materials	
Chemours CO/THE	Materials	

Company	Sector	Current Status
Detour Gold Corp	Materials	
Huntsman Corp	Materials	
International Paper Co	Materials	
Packaging Corp of America	Materials	
Lundin Mining Corp	Materials	
Methanex Corp	Materials	
Nucor Corp	Materials	
Southern Copper Corp	Materials	
Teck Resources LTD-CLS B	Materials	
West Fraser Timber Co Ltd	Materials	
Westrock Co	Materials	
Capital Power Corp	Utilities	
Consolidated Edison Inc	Utilities	
Dominion Energy Inc	Utilities	
Duke Energy Corp	Utilities	
First Energy Corp	Utilities	
Fortis Inc	Utilities	
Northland Power Inc	Utilities	

Company	Sector	Current Status
American Tower Corp	Real Estate	
Equity Lifestyle Properties	Real Estate	
KIMCO Reality Corp	Real Estate	
MGM Growth Properties LLC	-A Real Estate	
Park Hotels & Resorts Inc	Real Estate	
Prologis Inc	Real Estate	
Ventas Inc	Real Estate	
WP Carey Inc	Real Estate	
Capital Power Corp	Real Estate	
Mid-America Apartment	Real Estate	

DISCLAIMER: This is an internal report intended only for clients of Qube Investment Management Inc. The ideas presented within it form part of an overall portfolio management position and are not to be acted upon without coordination from your advisor.

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Qube Investment Management Inc. is a registered portfolio management firm in the Provinces of Alberta and British Columbia and was registered as a portfolio management firm on June 25, 2012. Any return period cited before this date was prior to QIM being registered as a portfolio management firm. Inception was Jan 1, 2011 and all returns are for a modeled portfolio initiated at \$500,000. Your actual returns may vary according to your individual portfolio. The modeled returns are calculated inclusive of dividends, adjusted to the Canadian currency, and are determined via the IRR (Internal Rate of Return) method. The gain/loss shown are simple (non-compounded) returns for periods up to one year. If the time since inception date is more than one year, then the return shown is an annualized return. For comparison purposes, the Kaleo model(s) are reported as gross returns before investment management fees. Individual investor level returns will differ as the fees agreed to in your Investment Management Agreement (IMA) are subtracted from the gross return.

At any one point in time, the composition of the Kaleo model may change. Currently, the focus for our models (Kaleo A and Full) is to invest in a globally diversified portfolio of liquid stocks with a minimum market capitalization of \$1 billion. Our diversification strategy is to have similar industry weightings between our Kaleo models A and Full, which in turn will have similar weightings to the S&P 500. Our investment mandate is to not have any one industry sector or sub-group exceed 2.0 times the percentage weighting assigned to that group by the S&P 500 index unless the sector or sub-group composes less than 5% of the total index. Please refer to your Investment Policy Statement (IPS) for more details.

Index comparisons are based on the total return index provided by Standard & Poor's for both the S&P/TSX and the S&P 500. All index returns are inclusive of dividends, adjusted to the Canadian currency, and, similar to the modeled portfolio, determined via the IRR method. Please note that, as total return indices are not actual portfolios, these returns do not include the cost of management and/or trading fees.

Past performance is not indicative of future results and there is no assurance that our model portfolio will achieve its objectives or avoid significant losses.





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