QUBE COMMENTARY

July 2019

QUBE HUNTS FOR TREASURE

CONTENTS

Page 5

Page 14

Page 22

Letter From The Editor
Ian Quigley

This, now semi-annual research newsletter, takes the same approach as the last. We want to share our positive energy about active investing and communicate the newly found undervalued positions that excite and motivate us. We believe that there IS treasure within the seas, waiting for discovery.

This summer, Qube welcomed another new crop of student analysts: Nick, Matthew, Austin and Samir, all young, bright and eager. We are so fortunate. Our summer research program ambitiously considers over one hundred potential companies, all needing to be valued and evaluated. Recently re-constructing the portfolio has provided us cash that we are ready to reinvest. Thanks to our 2018 investment in Bloomberg terminals, Qube is also pushing hard to expand our professional skills in both investment valuation and portfolio management.

Qube is also making plans to accommodate our recent growth. We are evaluating new places to set up shop, as well as considering renovation ideas for our current home. To check out our latest team, please check out our revamped website at www.qubeinvest.ca

Best wishes from all of our team at Qube (Ian, Brenda, Nicole, Anya, Noah, Michael, Patrick, Nick, Matthew, Austin, Samir), and thank-you for allowing us the opportunity to serve your wealth management needs.

Ian Quigley, MBA
Senior Portfolio Manager

Kaleo & Qatalyst Portfolios: Past Performance

	YTD	2018	3-Year	5-Year	Inception
Kaleo A	12.5%	-1.9%	10.1%	11.2%	12.5%
Kaleo Full	13.6%	-0.5%	12.5%	13.0%	13.6%
Kaleo Benchmark	14.3%	-4.9%	10.4%	7.9%	8.8%
Qatalyst	20.6%	-19.7%	17.8%	--	5.7%
Qatalyst Benchmark	15.1%	-2.5%	11.0%	--	10.8%

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 June 28, 2019.

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%	13.2%	-7.9%	6.1%	4.7%	7.1%
Fidelity NorthStar	10%	-1.0%	-5.8%	-0.3%	4.3%	9.3%
Dynamic Global Dividend	30%	16.6%	4.2%	14.5%	13.4%	11.8%
BlackRock Int'l Equity	10%	7.9%	-8.4%	4.3%	3.2%	5.8%
BlackRock US Equity	30%	11.7%	1.2%	9.6%	11.2%	12.9%
Equity Portfolio		11.8%	-1.7%	8.5%	8.4%	7.8%
Bond Portfolio		5.6%	-0.3%	1.2%	2.0%	2.6%

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 June 28, 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.

THE 20 BILLION DOLLAR BILL NOBODY WOULD PICK UP

By Ian Quigley, MBA

His name is Michael Hawkins, and he won't return my calls.

I left him a voicemail telling him that, despite what they said in court, I thought he was a hero and wanted to make him the lead story in our next research commentary. I told him that Qube's clients needed to hear his story, but my emails and social media messages proved fruitless. Currently, it appears that Michael Hawkins only gives interviews in the presence of his legal team.

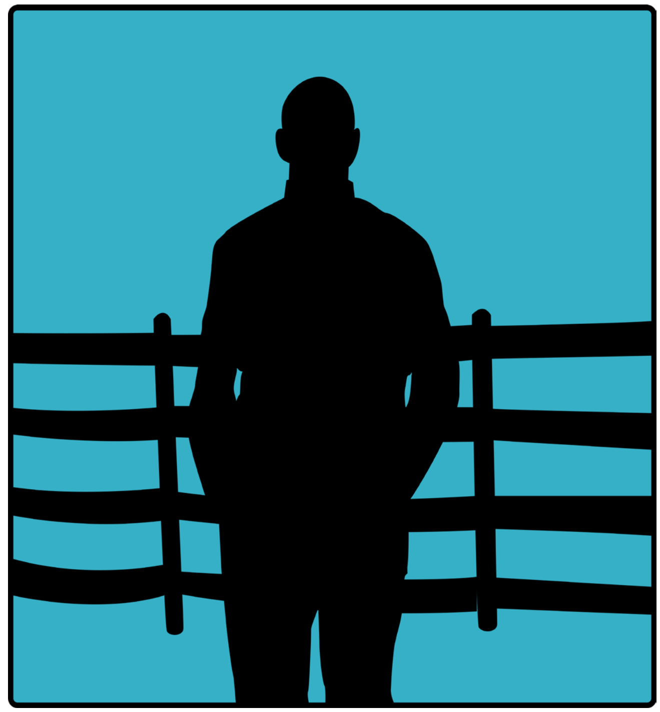
There is a well-worn joke in the economics profession that involves two economists: one young and one old walk down the road together. The young economist looks down to see a $20 bill on the street and says, "Hey, look a twenty-dollar bill!" Without looking, his older and wiser colleague replies, "Nonsense. If there was a twenty-dollar bill on the sidewalk someone would have already picked it up." The point is if the stock markets offered large opportunities to profit, someone would have already found them. This logic extends to the core of our investment management at Qube. Can we find value in the financial markets for our clients? Is there treasure out there to be found?

In his last interview with the publication Institutional Investor, Hawkins shared his professional background. He initially worked as an actuary in Regina, pricing and designing insurance products. I found some of his first impressions similar to mine when I worked as an underwriter at Alberta Blue Cross. Largely, the idea that insurance companies are clever. Most often, companies sell products (insurance) where customers pay premiums for many years with little to no benefit ever received. Interested in this framework, Hawkins noticed an overwhelming trend: many customers appeared to lapse on their permanent insurance policies after paying years and years of premiums, thereby relieving the insurance company from ever having to deliver a life insurance payout. This trend got Hawkins thinking.

The story we are about to tell is similar to the two economists, except Michael found a $2,000,000,000 bill untouched, and he decided to act.

First, some background information.

In the late 1980s, insurance companies in Canada invented a new approach to life insurance called "Universal Life." These policies allowed customers to prepay large premiums into an account only to then self-manage those investments using various options that included both guaranteed term deposits and stock and bond market funds. Think of it as having both an insurance policy and investment account at the same time. Canada Revenue Agency offered favourable tax regulations that loosely covered these contracts, governing how much premium could be paid into the policy (over various periods) and invested exempt of tax (similar to the Tax-Free Savings Accounts (TFSAs) launched in 2009). The opportunity to invest within a tax-shelter spawned an entire industry of investment/insurance planning. Recognizing the product's success, insurance companies jockeyed for market-share by adding various innovations and features.



One key development that arose was the "transit account," a taxable investment account that would automatically accept any pre-paid premiums deemed excess by CRA regulations. These regulations, referred to as MTAR rules, were complex, beyond the reach of a policyholder, making it possible to self-manage an account. Therefore, to ensure customers followed regulations, insurance companies offered to not only contractually monitor accounts but also create and manage a separate transit facility which would welcome as much premium as the client was willing to give.

They also created incentives to encourage the use of these insurance investment accounts. High-interest rates in the 1980s prompted competition among insurers to offer guaranteed rates on term deposits available within these policies. Several insurance carriers (or today their successors), including Aetna, Manulife, RBC Life and BMO, offered deposit rate minimums of 4% or better.

Enter Michael Hawkins.

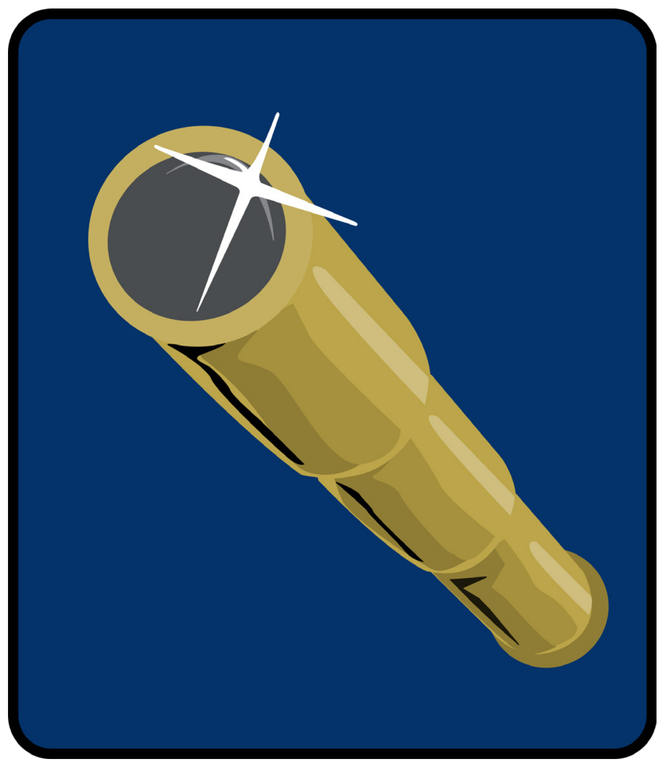
In the years leading up to 2007, Hawkins recounted conversing with a banker who mentioned hearing about old insurance contracts with minimum guaranteed rates. When Hawkins considered the now low-interest-rate environment, a 4% deposit guarantee appeared extremely valuable.

Hawkins realized that the combination of transit accounts (no deposit limits), combined with deposit guarantees, made for what could be a once in a lifetime value payout. Only four Canadian Provinces allowed for the resale of old insurance contracts, including Saskatchewan; so Hawkins began seeking and purchasing these contracts.

He initially found eight, underwritten by a number of different Canadian insurance companies, all offering unlimited deposits at guaranteed rates of 3% or higher. For a couple of years, Hawkins tested the system, increasing deposits; and his system worked, went unchallenged.

In 2011, he met Gary Selke, a hedge fund manager at Front Street Capital, and together, they managed to deposit a reported $14,000,000 into these contracts.

It might be worth a pause to discuss the implications of Hawkins strategy. He managed to gain control of numerous contracts with at least three Canadian insurance companies, requiring them to pay him a guaranteed return of at least 3% on unlimited amounts. Let’s look at Manulife, for example. The current market requires from Manulife only 2.31% on shorter-term bonds and 1.85% on what they call “High-Interest Savings.” Hawkins, on the other hand, has the ability to get Manulife to pay 3%. He could re-sell Manulife to the institutional market with a massive risk-free premium, a move that would allow him to hold the company hostage. Manulife (and friends) were not amused; litigation began in 2016 with a trial in late 2018.



Enter Muddy Waters

Muddy Waters, a famous hedge fund, is most well known for spotting fraud at a Canadian-listed Chinese company called Sino-Forest. When Muddy Waters released its research on Sino-Forest, its stock fell 74% and eventually went bankrupt (March 2012). Hedge funds make money when the stock market fluctuates. A contract that makes money on a falling stock is called a short-contract. Muddy Waters had gone short on Sino-Forest just before sharing its fraud investigation.

After reviewing the trial and Michael Hawkins' work, Muddy Waters also went short on Manulife and then published its opinion/endorsement of Hawkins' work. Manulife, according to Muddy Waters, was in deep trouble with Hawkins' ability to resell their guarantees in the wholesale market. Manulife shares immediately fell nearly 14% and then another 10% in the month to follow. In the trial, Manulife presented an expert witness who confirmed Hawkins was threatening the financial viability of Manulife. Meanwhile, Manulife (and friends) were busy writing press releases telling investors not to panic.

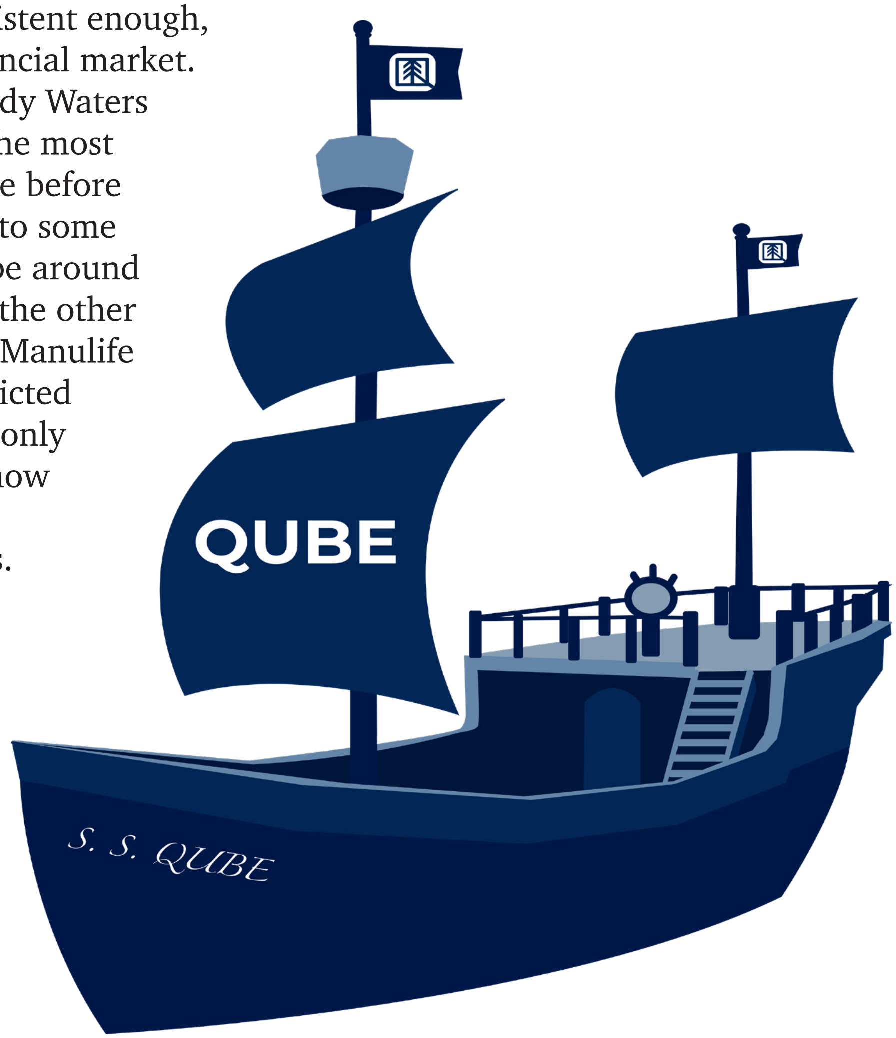
In recent months, things have not gone well for Hawkins. His team now faces criticism from not just three Canadian insurance companies, but also several provincial governments and insurance regulators. Canada, it seems, is not ready for this assertive style of capitalism. In September 2018, the Saskatchewan government made a landmark move by changing its insurance law, limiting the amount of deposit allowed in an insurance contract. Litigation ensued over the ability to write retroactive legislation in this context, but the trend is clear: despite being shrewd and cunning, Hawkins is not going to own these Canadian insurance companies.

Much can be learned from Hawkins' story. Hawkins didn't just stand around the water cooler talking about an opportunity, and its arbitrage potential. Manulife (and friends) created a bad product and should be held accountable for their mistake. Bad products often cause real pain and suffering for the customer and real financial pain and suffering for the corporation.

In this story, pain for the corporation happened to be gain for the customer. Nonetheless, bad products result from bad management, and Manulife should be held accountable. Otherwise, long-term protection and profit for shareholders cannot be trusted. We best not forget that the entire American financial sector was taken to its knees in 2008 because of similar decisions and poor management south of the border.

For myself, I am reassured by this story that treasure still exists and not just in the ocean. Recently, the Port Nicholson, a World War II British merchant ship resurfaced 50 miles off the coast of Maine with 71 tons of platinum ingots worth about $3 billion. The HMS Victory, which sank in the English Channel in 1744, was found with a rumored "secret" cargo of gold worth $1 billion. Finally, Spain is currently recovering an estimated $500 million of gold and silver from the Spanish galleon Nuestra Señora de las Mercedes that sank in 1804.

Thanks to Hawkins, we can be reassured that for those who are brave and persistent enough, treasure also exists in the financial market. The irony is the fact that Muddy Waters was the one who benefited. The most that Hawkins could have made before he was shut down, according to some very rough estimates, would be around $750,000. Muddy Waters, on the other hand, took short positions on Manulife just prior to a 15-25% unpredicted drop in share prices. One can only shudder at the estimation of how much money they might have made on those short contracts. "Shiver Me Timbers."



At Qube, we run a small research team looking daily for undervalued investments. Hawkins and Muddy Waters both reassure us that clever and creative effort can be rewarded. Hawkins is an inspiration to all research analysts and portfolio managers looking for dollar bills left untouched by the masses.

We Just Want Their Gold!

By Patrick Choi, CFA

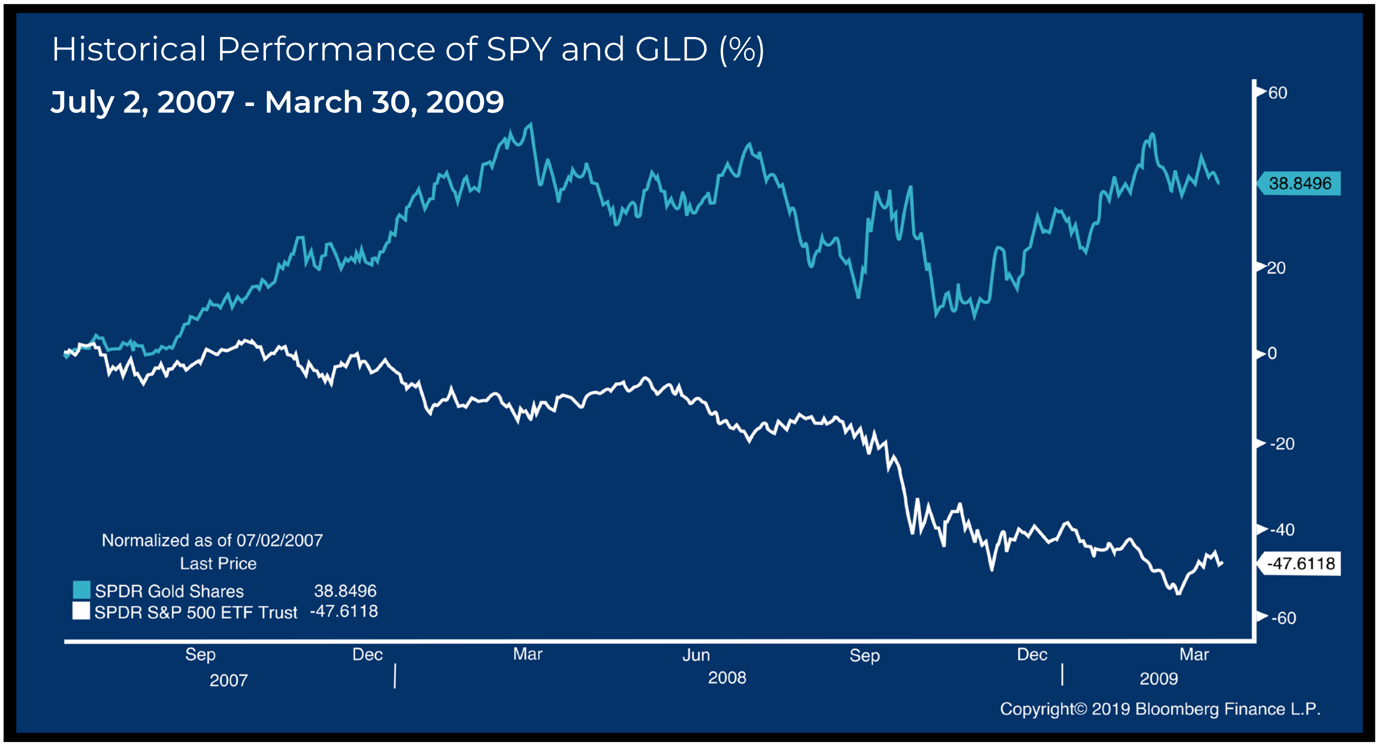
Last quarter, our research team focused its efforts on current holdings in our model portfolios. We revisited our thesis for gold and evaluated the resulting implications of our investment in the SPDR Gold Trust (the largest, physically backed, gold exchange-traded fund).*

Let's review what we found.

Gold's Purpose

First, it is important to remember that our insights and resulting conclusions hinge on the idea of gold being money.

Historically, gold has acted as a currency since at least 550 B.C. According to Herodotus ("The Father of History"), gold and silver coins were first used as monetary instruments by the Lydians under their ruler Croesus. Gold (or currencies back by gold) remained one of the most common forms of money until President Richard Nixon unilaterally terminated the convertibility of the U.S. dollar to gold in 1971. Presently, fiat money replaces both commodity money (directly using gold as money) and representative money (using money backed by gold) as a medium of exchange in commerce. While gold lost its place as a medium of exchange, it still retains its position as a store of value; gold is the only currency



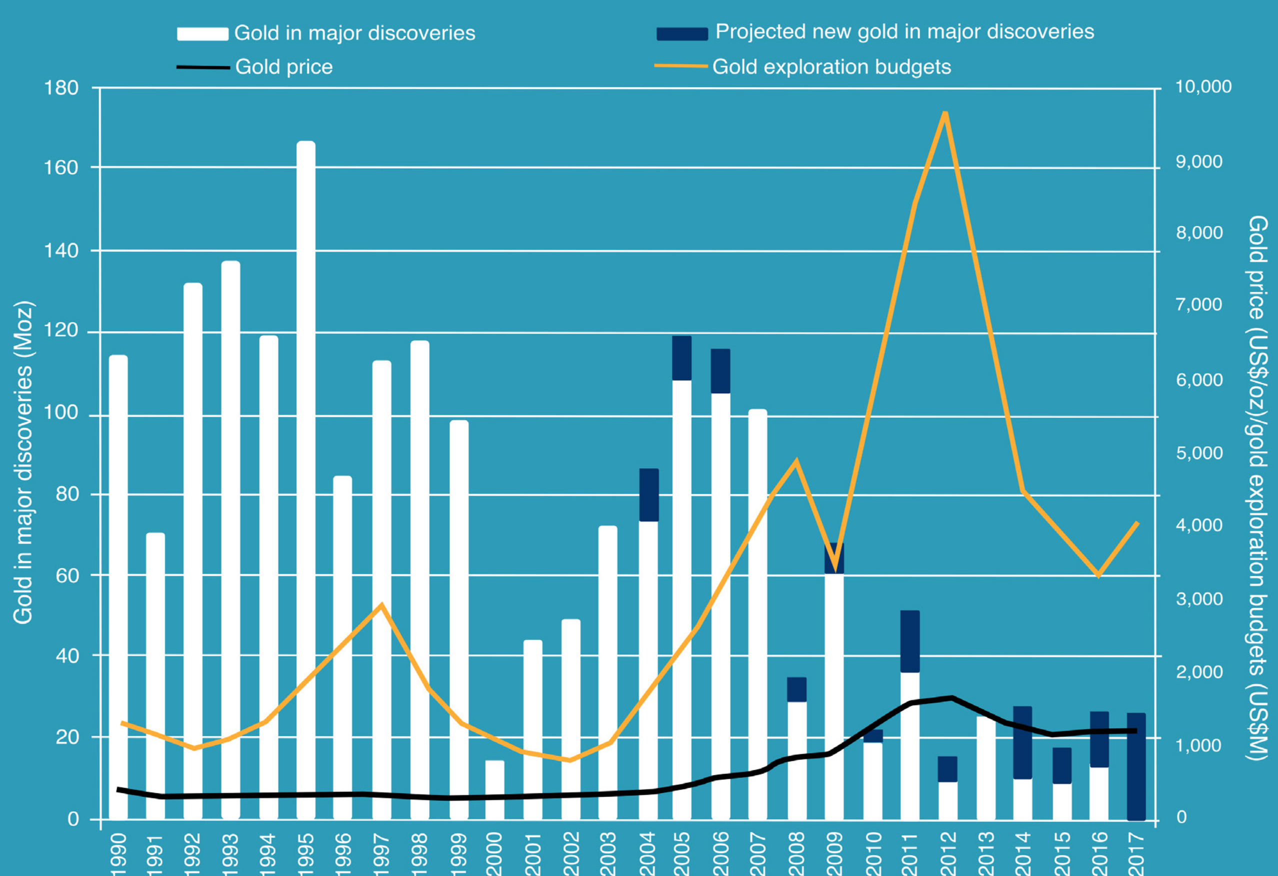
*An exchange traded fund (or ETF) is an investment fund traded on stock exchanges. Like stocks, but unlike mutual funds, ETF intraday prices move based on supply and demand.

you cannot print or make. No summoning money at will to pay off spending or prior debts. Unlike fiat currency, the only way to increase the amount of gold existing in circulation is to mine it from the ground. We believe that this property makes gold a safe-haven asset and provides diversification benefits to the investor. For example, during the Great Recession, gold (GLD) outperformed the S&P 500 (SPY) by over 86%! Such a negative correlation (between the stock market and gold), is the main reason we continue to include it in our holdings.

Gold's Falling Supply

According to research from S&P Global Market Intelligence, over the past 30 years, we've seen new gold mine exploration become increasingly more expensive with fewer mines being discovered overall. Concurrently, in existing mines, gold reserves are becoming depleted, causing production to decrease year-after-year. We believe that the lower supply of gold going forward should eventually be a boon on the price of gold.

Gold in Major Discoveries by Year, 1990-2017



Dates as of April 26, 2018.
Includes deposits containing at least 1 Moz of gold in reserves or 2 Moz in reserves, resources and gas production.
Discovery year is year of initial successful drilling.
Source: S&P Global Market Intelligence

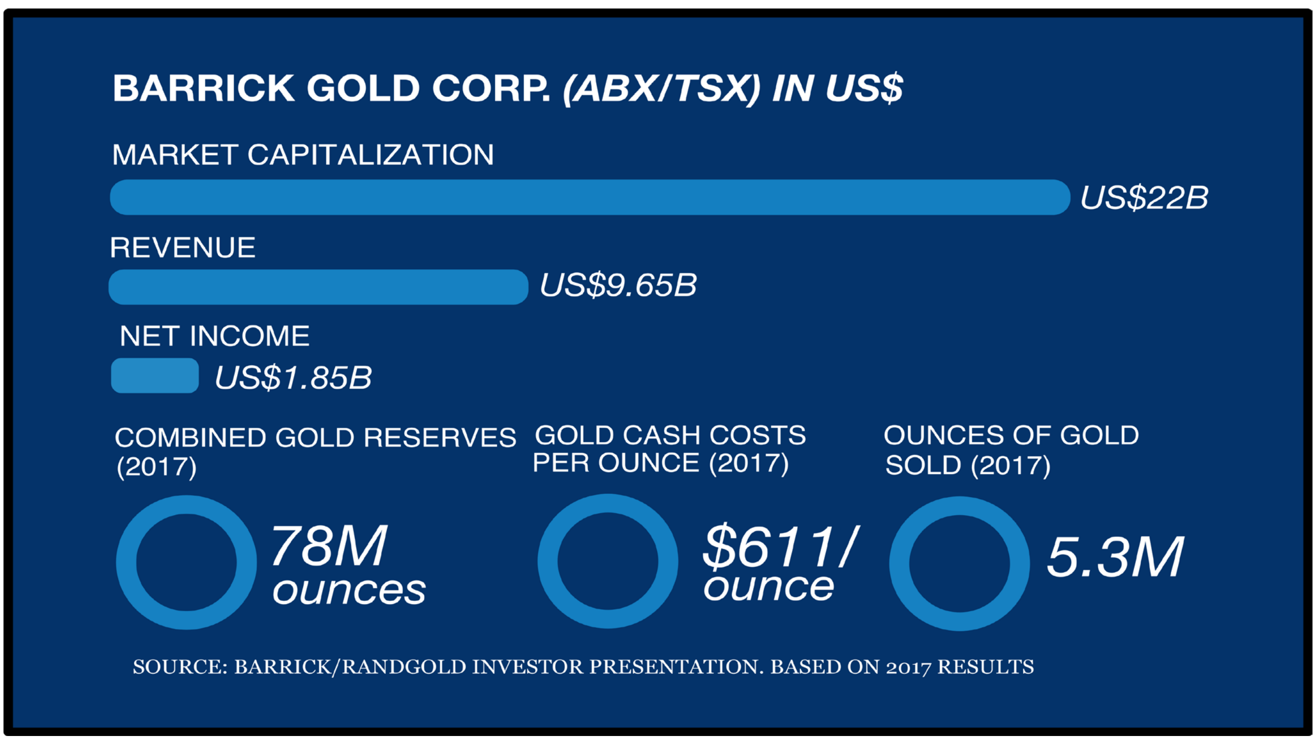
It is often misunderstood that an increase in price results in higher earnings and profit potential for gold miners; this is not always the case. For the situation highlighted above, gold miners face a benefit of rising gold prices that is offset by the prospect of higher costs and lower production. The realization of this potential scenario results in a perverse situation of appreciating gold prices but falling earnings for miners.

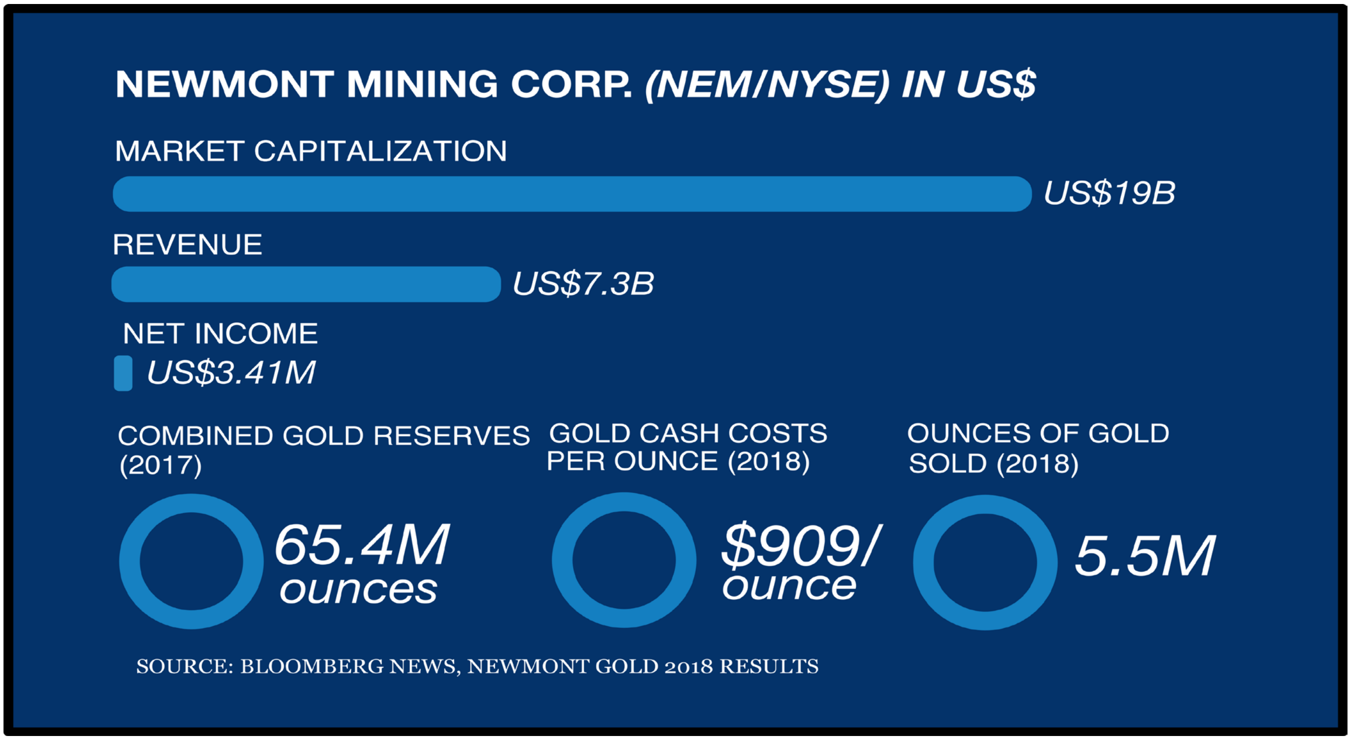
In recent months, miners have started to realize that consolidation is the only way to offset production declines and exploration expense. By purchasing other peers, they guarantee a payoff for their money (versus exploring and finding nothing); and will, at the same time, boost declining reserves with the addition of new mines. Some recent examples include Barrick acquiring Randgold; Newmont acquiring Goldcorp; and Newcrest Mining acquiring Imperial Metals.

Barrick Gold: The "Great" Dealmaker

Earlier this year, there was a highly publicized, hostile takeover attempt from Barrick Gold for Newmont Mining. For the majority of cases, when one party wants to acquire another company, they usually offer a positive-premium to entice shareholders to give up their shares. In the case of Barrick's offer for Newmont, their decision to make a negative-premium bid, at the same time when Newmont was trying to close their own bid for Goldcorp, made us suspect that Barrick had ulterior motives.

This was confirmed when Barrick later dropped their unsolicited bid, but not before announcing that they were able to negotiate a joint venture (terms heavily favoring Barrick), with Newmont pertaining to their operations in the Nevada desert.





The prize from Barrick's red herring? $5 billion of potential synergies split 61.5% to Barrick and 38.5% to Newmont. A deal that is all the more remarkable considering it was discussed on and off for over 20 years, with Newmont initially demanding over 50% of the joint stake.

Barrick Gold and Newmont Mining are the top two gold mining companies in the world by production and reserves. Barrick's joint venture with Newmont solely relates to their operations in the Nevada desert. Duplicating total processing plants and infrastructure resulted in an estimated present value cost of approximately $5 billion. By consolidating this one operation, shareholder returns could increase by 14% for Barrick and 10% for Newmont. We believe this deal further sets the tone for more consolidations to come in the future.

Gold's Future Outlook

In an interview, Mark Bristow, CEO of Barrick Gold, quoted, "This industry, if it had carried on the way it was, was going to become irrelevant. The industry has too few assets with too many management teams, and it needs reorganization."

We believe Mark is correct. The gold mining industry is in desperate need of reorganization amidst slowing gold production. During this time, we foresee high one-off costs to both acquire and integrate peers. As a result, the stock price of these companies could fluctuate in tandem with volatility, which defeats our purpose for investing in gold. Qube's plan going forward is to continue holding physical gold through the SPDR Gold Trust and revisit the landscape after the consolidation dust settles.

Corporate Surplus: Where To Store the Booty!

By Noah Clarke, MA and Ian Quigley, MBA

We think we found something significant here, but it's complicated. While it is hard to explain, we find that its implications are serious, and has to do with financial planning for business owners. Specifically, the question of where and how to optimally place investments to minimize tax drag and maximize long-term value. Our research indicates that conventional wisdom may need to be reconsidered within the tax planning community, and our findings are significant enough that we plan on submitting our work to the Canadian Tax Foundation for publication. Not yet intrigued? Read on.

More often than not, when a business owner becomes profitable, they are advised to reposition their affairs by establishing a holding company to own the shares of their active business corporation. If a business owner holds the shares of their company directly (not in a holding company), then any payment of dividends from the corporation will be taxable personally in the year received. If, on the other hand, a holding company is set up to own the shares of the active business, then the business owner can pay a dividend to their holding company tax-free. By passing excess earnings from the active business to a holding company, the business owner is thereby able to defer the difference between the taxes charged on active business income (a low rate), and the amount of tax due from the owner if these funds are paid out personally (a higher rate).

Using this structure to build up creditor protected capital in a holding company for future purchases or contingency plans makes a lot of sense, and this structure is also often used to accumulate a retirement nest egg or "pension" for the business owner. In effect, the holding company becomes an additional investment account; possibly, an alternative option to personally held investment accounts such as RRSPs and TFSAs.

Why might this be a problem?

Point One:

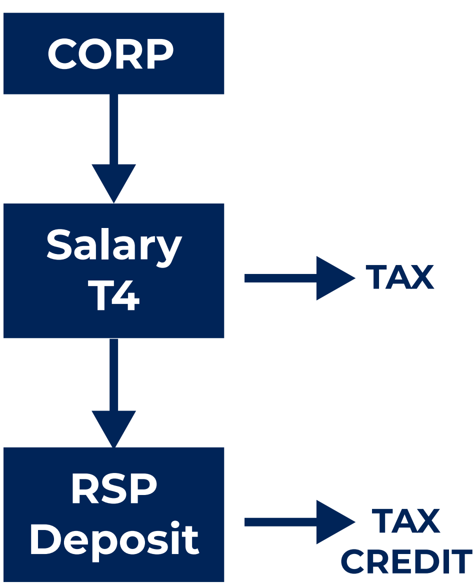
The keyword here is "alternative."
According to an Angus Reid poll from 2017, the vast majority (87%) of Canadian business owners indicated that they were more inclined to accumulate retirement savings in their corporate investment account(s) rather than contribute to their personal investment accounts. While conventional wisdom may support this inclination, our research indicates that the decision to focus exclusively on saving within the corporation is sub-optimal. Under most circumstances, RRSPs and TFSAs offer far more value to business owners than corporate investment accounts.

Point Two:

Of course, since RRSPs and TFSAs have set contribution limits, business owners may still end up accumulating funds in their corporate investment account(s). In this case, it's imperative that the right types of assets (i.e., stocks, bonds and cash), are distributed in a tax-optimal manner across account types. Our model results show that, with proper design, investors with a mix of corporate and personal accounts can significantly increase their after-tax return without taking on additional risk. Conversely, missing out on this planning opportunity can be costly.

Some Background

First, as a refresher, while salary received from a corporation qualifies as earned income and in turn creates RRSP room, dividends paid out to shareholders from the corporation do not. As a result, to invest in an RRSP, business owners must pay themselves a salary. Now, if a shareholder chooses to distribute corporate income as salary, they will pay personal tax (and potentially Canada Pension Plan premiums) on the salary income. Alternatively, if dividend compensation is chosen, the company will pay corporate tax when income is earned, and the shareholder will then pay personal taxes when proceeds are distributed as a dividend.



In an ideal world, once a corporation's after-tax business income is distributed to its shareholders, and personal taxes are paid on the proceeds, each taxpayer's combined corporate and personal taxes should come out about the same, as if they were "standard" employees. To accomplish this goal, the 1967 Carter Commission put in place various tax integration mechanisms, which have been tweaked multiple times over the years.

In reality, the results aren't perfect, though they often come close. This is especially true for business owners that have access to the small business deduction (SBD), which provides access to favorable tax rates on eligible active business income up to a limit of $500,000. Nonetheless, earning income through a corporation, and then distributing the after-tax surplus as a taxable dividend, incurs more combined taxes currently than paying salary in Alberta Provinces.

The Corporation as an RSP?

There is, however, the "tax deferral advantage" for business income in all provinces, wherein a large amount of tax can be deferred by retaining income within the corporation. This perceived advantage lends to common advice that the business owner leave all dollars over and above their income needs inside of the corporation to defer paying personal taxes. The idea being that this makes more dollars available for investment, which can be taken out as dividends at a lower tax rate later on. Let's use the example of an Albertan corporation earning $10,000 in excess SBD income.

Option 1:

Invest In Corporation

- **Leave the profit in the corporation;**
- **Pay the corporate tax at the small business rate of 11% ($1,100);**
- **Invest the $8,900 remaining in a corporate investment account;**
- **At a later date, push the investments out of the corporation as a dividend.**

Option 2:

Invest Personally

- **Pay $10,000 out as salary;**
- **Invest $10,000 in an RRSP (thanks to the tax credit), or;**
- **Invest $5,600 to $8,000 after-tax to a TFSA or non-registered account depending on the shareholder's income tax bracket).**

Presented with these planning options, the shareholder understandably cares only about which option will provide them with the highest after-tax value in-hand at a future date, whether it be 5, 10, or even 40 years out.

Our Tax-Planning Model

Tax planning work is not new to Qube. For years, we have played with modeling these decisions and evaluating various funding decisions over time. This year, we greatly expanded our model to include recent tax changes and investment options that business owners must often decide between. These investment options include:

- The ratio of stock and bonds in a portfolio;
- The ratio of dividends to capital gains on the stocks within the stock portfolio;
- The ratio of foreign dividends to Canadian dividends;
- The portfolio's turnover rate for stocks;
- The company's tax rates (low-rate vs. general rate);
- The business owner' pre and post-retirement tax brackets, and;
- The company's ongoing business income.

In summary, it's complex. Once the model was built and tested for accuracy, we were able to then run scenarios to evaluate the financial impact of these options over time. In fact, our model allowed for millions of combinations of these factors, even if we only needed to run around a hundred scenarios to confirm how the various inputs affected the results.

The Base Case

For our base case, we modeled:

- Three alternative portfolio asset allocations (100% bonds, 100% equities and 50% mix of each),
- Three differing future income expectations (a stable 42% marginal tax bracket, the marginal tax bracket decreasing to 38% from 42% and the marginal tax bracket increasing to 47% from 42%) and;
- Two business income tax scenarios (100% small business rate vs. 100% general business rate).

All other inputs we kept consistent with our Kaleo model (i.e., 20% domestic equity content vs. 80% foreign equity content, 20% dividend returns vs. 80% capital gains returns and 20% annual portfolio turnover). As one might expect, we found that the relative ranking of each option was highly dependent on the specific situation of the shareholder – reaffirming our belief that conventional wisdom has no place in financial planning. Nonetheless, we were able to map out basic guidelines for business owners based on the results of our analysis.

Finding #1: Time Matters

Our first finding was that over shorter time horizons (up to 10 years), investing within the corporation could potentially offer a higher after-tax value to the shareholder relative to other investment options, but this was contingent on a zero per cent allocation to fixed income and an income tax bracket that was stable or decreasing over time. That said, of the 18 base case scenarios that were run, the corporate account ranked highest in only two scenarios as of the tenth year - occurring only when the business owner's tax bracket was stable over time and the portfolio was invested 100% in equities.

Over longer periods of time (more than 20 years), we found that investing in the corporation was always sub-optimal relative to RRSPs and TFSAs. In fact, in some scenarios choosing to invest in a non-registered account would beat investing in the corporation. Given these findings, we are able to conclude that retaining excess funds within the corporation does not make sense for business owners with 10+ year investment horizons provided they have RRSP or TFSA contribution room and are invested in a portfolio with equity attributes that are similar to our own investment portfolio.

Finding #2: Placement of Bonds Matters

Since investors won't necessarily have investment portfolios that are aligned with Kaleo, it's important to evaluate how each of the inputs can affect the results. For instance, if we take the most promising scenario (100% equities and a stable income tax bracket) and increase (decrease) the ratio of dividends to capital gains, is it possible to boost relative benefits to investing in a corporate account?

Small Business Tax Rate Scenario:

Tax Rate	Portfolio	Account	Year 5	Year 10	Year 15	Year 20
Decreasing	100% Fixed Income	RRSP	1	1	1	1
		TFSA	3	2	2	2
		Corporate	2	3	3	3
		Non-Registered	4	4	4	4
	50% Fixed Income/50% Equities	RRSP	1	1	1	1
		TFSA	3	3	3	2
		Corporate	2	2	2	3
		Non-Registered	4	4	4	4
	100% Equities	RRSP	2	1	1	1
		TFSA	3	3	3	2
		Corporate	1	2	2	3
		Non-Registered	4	4	4	4
Stable	100% Fixed Income	RRSP	1	1	1	1
		TFSA	1	1	1	1
		Corporate	3	3	3	3
		Non-Registered	4	4	4	4
	50% Fixed Income/50% Equities	RRSP	1	1	1	1
		TFSA	2	2	2	2
		Corporate	3	3	3	3
		Non-Registered	4	4	4	4
	100% Equities	RRSP	2	2	1	1
		TFSA	3	3	2	2
		Corporate	1	1	3	3
		Non-Registered	4	4	4	4
Increasing	100% Fixed Income	RRSP	3	2	2	2
		TFSA	1	1	1	1
		Corporate	4	4	4	4
		Non-Registered	2	3	3	3
	50% Fixed Income/50% Equities	RRSP	3	2	2	2
		TFSA	1	1	1	1
		Corporate	4	3	3	3
		Non-Registered	2	4	4	4
	100% Equities	RRSP	4	3	2	2
		TFSA	1	1	1	1
		Corporate	2	2	3	3
		Non-Registered	3	4	4	4

Impact of Dividends on the Corporate Portfolio

Dividends are taxed (at varying rates depending on whether they are Canadian or foreign) in the year received by the corporation, which thereby creates tax drag on the portfolio. In contrast, dividends paid out to RRSPs and TFSA do not incur taxes in Canada (though non-Canadian dividends are subject to a 15% withholding tax in a TFSA). As a result, there is a higher benefit to investing in the corporation if the ratio of dividends relative to capital gains is kept as low as possible. When the ratio of dividends to capitals gains was reduced to 0% in our model, we found that the corporate investment account could rank higher than other alternatives for up to 20-years, but still dropped to third-place for longer periods of time.

Impact of Capital Gains and Portfolio Turnover

Capital gains are the most tax-efficient form of investment return in a corporate account because only 50% of a capital gain is taxable and the remaining 50% flows tax free to the owner through the capital dividend account. In addition, the timing of the payment of tax on capital gains can be deferred since capital gains are taxed only when the investment is sold. That said, it's unlikely that an investor will be able to hold on to an investment in perpetuity in order to avoid triggering a capital gain. It's often necessary to dispose of underlying investments once they've reached their full value, or when the portfolio needs to be rebalanced. The frequency at which underlying investments are sold on an annual basis is expressed as the portfolio's "turnover rate." As an increase in the turnover rate means a smaller tax deferral, the corporate investment account will be negatively affected by portfolio turnover.

When the portfolio turnover rate was reduced to 0% in our model (an unrealistic assumption for most investors), while also holding constant a dividend to capital gains ratio of 0%, we found that the corporate investment account ranked higher than all other investment accounts over the entire 40-year investment horizon. In fact, this result held true even if the portfolio's fixed income allocation was increased to 20% or the ratio of dividends to capital gains was set at 5%. Based on these findings, we conclude that portfolio turnover and the tax-drag that it entails, is the most important factor impacting the decision to invest in a corporate account. Note that under the best circumstances, it would only take a 5% hike in turnover rates to drop the optimal time horizon for corporate investment accounts from 40 down to 35 years.

Impact of Foreign Content vs. Canadian Content.

As previously touched upon, there are differences between how foreign dividends and Canadian dividends are treated when paid to corporate investment accounts. Foreign dividends are taxed as Part I corporate investment income at a rate 50.67% in Alberta, but generate a foreign dividend tax credit of 15%. Canadian dividends on the other hand incur Part IV tax, at a rate of 38.33%. In isolation, it would therefore appear to be the case that foreign dividends, factoring in the dividend tax credit, are taxed at a lower rate.

However, it's not so straightforward. We must take into account a recently updated component of tax integration: i.e., the Refundable Dividend Tax On Hand (RDTOH) account. In brief, when a corporation pays either Part I or Part IV tax, these amounts are tracked in the corporation's RDTOH account. Once dividends are paid out to the business owner through the holding company, this notional balance is then refunded to the corporation. In our model, we assume that the refund is then subsequently kicked out as a dividend in the same year.

As of January 2019, the RDTOH account was split in two, with one account tracking Part I tax and the other tracking Part IV tax. Most importantly for our purposes, the Part I tax paid on foreign dividends generates a corporate refund of 15.67%, whereas the Part IV tax paid on Canadian dividends generates a corporate refund of 38.67%. Because of this mechanism, and the differences in tax rates (both immediate and refundable), the short-term tax drag that can result from Canadian dividends may be offset by the fact that these taxes are then fully recoverable in the long-run.

When the ratio of foreign dividends to Canadian dividends was reduced to 0% in our model, while holding the ratio of dividends to capital gains at 20%, we found that the corporate investment account could rank highest for an additional 2-years (up from 10), but still dropped to third-place for all subsequent years. Clearly, varying the rates of geographic content leads to an unimpressive outcome, but these finding can still be applied when creating a tax-optimization road map for corporate investors.

Putting it all Together

We know that under realistic circumstances, RRSPs and TFSAs offer the highest value to investors. If a client were to approach me asking whether or not they should pay themselves a bonus of $10,000 in order to invest the funds in one of these accounts, I'd respond, "yes," 99 times out of 100. But, if a client had $30,000 in excess earnings, and due to contribution limits had to retain $10,000 in their corporate account, this would open up a further planning opportunity. Let's take the hypothetical one step further and assume that this client can contribute $10,000 pre-tax to both their RRSP and TFSA and has a marginal tax rate of 42%. As well, due to their risk tolerance, they will require a balanced investment portfolio allocated to hold 60% equities and 40% fixed income. Based on this information, we want to ensure that the right types of assets are distributed in a tax-optimal manner across the client's three account types while maintaining an appropriate asset allocation.

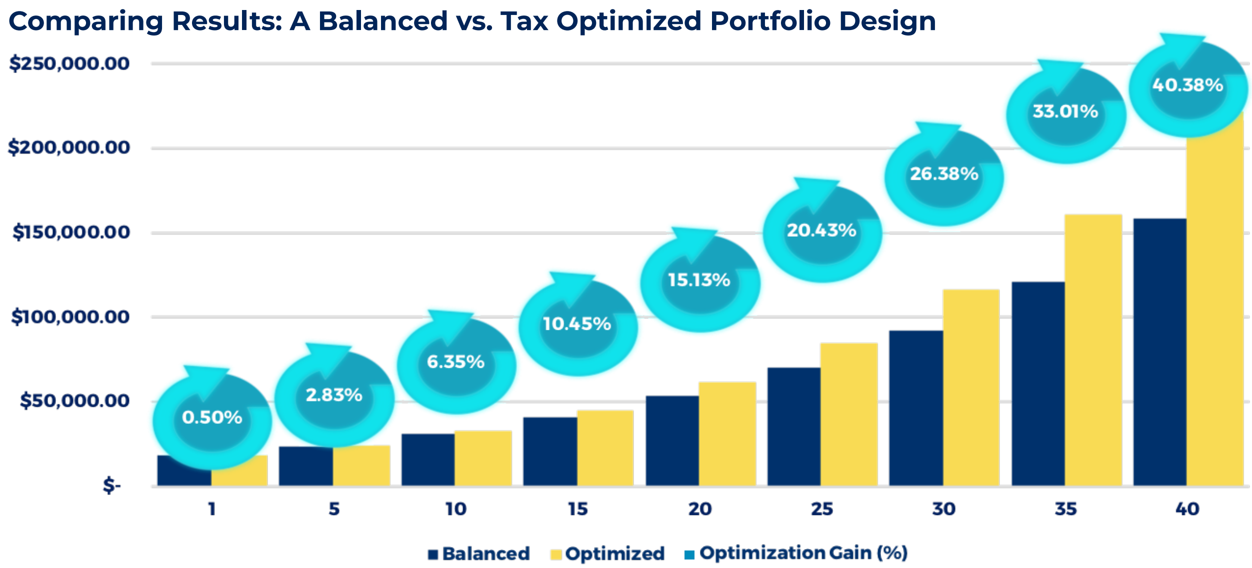
If we had learned nothing, one feasible option would be to hold the same equities and fixed income securities in equal proportions across all three accounts. Surely, we can do better. Knowing what we now know, we can enhance the tax-efficiency of this client's consolidated investment portfolio – ensuring that when funds are eventually withdrawn, the total proceeds available to spend are as high as possible.

After all, whether the benefit is a dollar or many thousands of dollars, we want to make sure that our clients realize the maximum value of their investments. Assuming an investment portfolio with similar characteristics to Kaleo, we can maximize the client's net-of-tax returns without letting the tail (taxes) wag the dog (financial needs and goals):

Step 1) Ensure that all bonds are held in the RRSP account, while all stocks are held in the TFSA and corporate accounts.

Step 2) Ensure that higher dividend paying stocks are held in the TFSA.

Step 3) Ensure that all available Canadian content is held in the corporate account.



NOTE: Results are based on the assumption that stocks return 8% annualized and bonds return 3% annualized.

As shown in the table above, by taking these steps, we can increase the after-tax value of the consolidated portfolio by 26.38% over a period of 30-years, which works out to an annualized return of 0.78%! At a time when the pre-tax yield on 30-year treasury bills is hovering around 2.5%, boosting the after-tax return of one's investments by 0.78% is certainly nothing to sneeze at. Especially, when the gains don't require additional risk – just astute planning.

It is this type of analysis and the potential for meaningful results that keeps us up at night, thinking of new ideas. Even within the scope of this research topic, there are further planning points that we would like to incorporate; including the use of Individual Pension Plans, the potential for income splitting and evaluating the effect of new passive income rules for small businesses. We'll be sure to keep you updated, if we find anything more of value. In the meantime, if you would like to chat about our findings as they relate to your investments, we'd welcome the opportunity to review your plans and make sure that your portfolio is optimized to meet them.

Corporate Accountability: A Student's Perspective

By Samir Esmail

Samir Esmail is a third-year finance major and Peter Lougheed scholar from the University of Alberta. This summer, he partnered with Qube's ESG Research team to complete a U of A "stretch experience," a project which helps students develop leadership skills, while also providing a social benefit. We sat down with Samir to see what he has learned so far.

First off. What is ESG Research?

When I started, I was eager to learn more about the importance of ESG work and how it benefits society at large, especially coming from a finance background. I learned that ESG involves researching a company based on their environmental, social and governance standards. As a result, this research requires a more in-depth investigation into a specific company or organization to find detail not readily available to the public.

Additionally, ESG scoring involves giving attention to a wide range of sub-categories within each section, which could include climate change concerns, proxy access at general meetings, and legal/regulatory compliance. ESG analysts are required to dive deep into a variety of different matters and draw inferences and conclusions about the company in question. Once qualitative information is gathered, companies receive a quantitative scorecard.

An ESG score needs to be recorded in a timely manner on an annual or bi-annual basis to prevent going out of date too quickly. The team at Qube has been excellent in helping me pinpoint main areas of concern and learning to distinguish between honest ESG work and greenwashing.

The most important and reassuring thing I learned during the research phase of my ESG training is the vast scale that independent ESG research has grown over the past decade. In particular, organizations such as Just Capital, Corporate Knights, and Sustainalytics have proven useful in providing a general overview of a company's ESG rating, while also showing their methodology in determining that specific score. I found that anyone with the right know-how can learn about a company's environmental, social, and governance practices, not just experienced analysts.

What else have you learned?

Throughout my research, I noticed that many rating agencies hold different standards, making it impossible to compare scores equally. Many ESG scores proved far from standardized or conclusive. For example, Institutional Shareholder Services Inc. reported the National Bank of Canada deserved top corporate governance recognition with a score of 1, while Sustainalytics barely placed them in their top 50th percentile, scoring them a 60 out of 100.

Qube analysts interpret ESG scores based on a set of ESG criteria that the management at Qube believes is most important and consequential for all stakeholders involved. This includes an overemphasis on board independence and good corporate governance, as well as strong labour and ethical standards.

Great, Samir. What were some of your key findings?

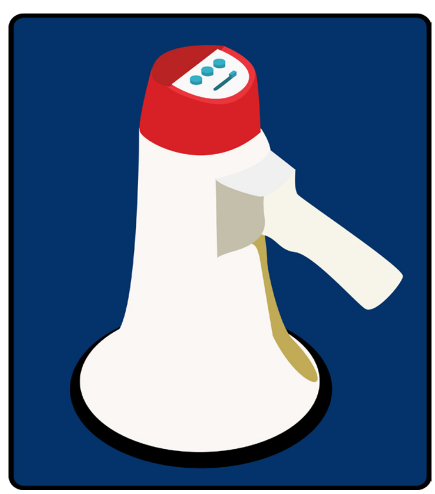
For every company I looked at, there was at least an attempt by management, or recognition, to incorporate ESG standards into their company framework. I was surprised to see such an engaged group of proxy coalitions dedicated to enhancing social responsibility. At least, to some degree, such action shows that active shareholder engagement can and does hold public companies accountable both socially and financially. With that in mind, I do not believe that we need to be overly pessimistic about the future of publicly traded companies. With large corporate companies, such as Telus and Scotiabank, both scoring 85% or better on their ESG review, I learned that positive ESG alignment could coexist with positive returns. I also saw, however, that public companies can fall out of line.

Unfortunately, I found some corporate laws to be undemocratic with restrictive proxy access and dual-class voting (both present at Aliment Couche-Tard). I discovered that in this case, in particular, founders used super-voting to restrict their shareholder's ability to voice change or advocate for progressive policy reforms.

The most interesting thing I uncovered when researching corporate governance is how often defensive and resistant management appeared to the recommendations made by their shareholders. I saw managers actively fight shareholder proposals, as well as implement measures contrary to their interests. These actions show more work needs to be done to preserve shareholder democracy.

Any other concerns about ESG?

During my ESG research, I found several situations where companies claimed to be doing something positive, such as carbon emission reduction but failed to act on it based on the public data provided. In these situations, it is clear that such a company would perpetrate greenwashing, given an explicit lack of progress in certain ESG areas.



In other cases, however, things did not appear so clear cut. For example, every public company also discloses an ethical code of conduct and human rights policy. The question, then, becomes not if they have a policy but whether or not they enforce it. Unfortunately, this insight is difficult to come by as an external researcher, and in many cases, we as public observers, do not truly know if these companies are following through on commitments or should receive an ESG bump. Problems such as these make ESG scoring a challenging skill to master.

Any final takeaways?

I was at first reluctant to see the overall societal benefit of ESG research. Now, more than a month into my ESG scoring, I have a newfound appreciation for ESG principles and shareholder advocacy. I firmly believe that public shareholders are one of the strongest institutions that can hold companies accountable to society. More research and public disclosure mean more information available to make informed decisions. If more people keep companies to an ESG criteria, I am optimistic it will encourage companies to commit to a higher environmental, social, and governance standard, as well as maintain shareholder confidence and customer retention now and in the future. I am excited that the work I have done at Qube has the potential to encourage both shareholders and companies to make better decisions about what actions they take, so that we all can benefit.

Thank you Samir for your help this summer. We look forward to reading more of your work.

Samir's ESG Research Summary

Weightings:	30%	30%	30%	10%	
COMPANY LIST	Environment	Social	Governance	Other	TOTAL
Aliment Couche-Tard	67%	71%	62%	63%	66%
Becton Dickinson	84%	86%	80%	75%	82%
Citigroup	88%	86%	82%	77%	84%
National Bank	67%	83%	85%	69%	77%
Scotiabank	83%	88%	88%	78%	85%
Telus	86%	91%	87%	83%	87%
Visa	82%	87%	76%	80%	81%
Western Digital	74%	73%	79%	78%	76%
Lear CORP	74%	76%	79%	75%	76%

Kaleo A, Full

Walmart (WMT): We first bought Walmart in our Kaleo portfolios on Apr 16, 2018, at a price of $87.30. Since, the company has produced a total, cumulative return on investment of approximately 28%, including dividends, on a constant currency basis. If we were to include currency appreciation, the total, cumulative return jumps to 35%. In our opinion, Walmart still trades at an inexpensive valuation considering they have the potential to be one of the few winning corporations to dictate the future of the retail experience.

Main Street is currently focused on the growth of e-commerce and the death of traditional retail. The rise of Amazon and the bankruptcy (or near bankruptcy) of companies like Sears and J.C. Penny continue to influence the typical consumer. Our opinion is that the future of retail rests somewhere in-between e-commerce and traditional retail: an omnichannel experience. Consider the following examples from Walmart:

- Customers can now order online, drive to a Walmart location, and have a personal shopper pack their order in their trunk.
- At Sam's Clubs, customers can bypass the checkout line and pay for items on their mobile devices.

Walmart's strategy to transform into an omnichannel experience seems to be working. In 2018, Walmart's e-commerce sales in the US grew 40%, and according to market research group eMarketer, Walmart's share of the US e-commerce market is expected to increase to 4.6% in 2019, from 4% in 2018. While peanuts compared to Amazon's 50% market share, this increase still shows Walmart's potential to capture an increasing amount of the e-commerce pie.

We believe an integration between the digital and the in-store experience represents the future of retail. Amazon, perhaps Walmart's closest competitor, has already started to build out their physical store presence through the purchase of Whole Foods (460 locations). Additionally, Bloomberg reported that Amazon is considering opening 3,000 Amazon Go stores by 2021.

Despite Amazon's investments, Walmart will still have a sizable lead with their 5,300 store count, these locations being situated within a 10-mile radius of 90% of the US population. In our opinion, Amazon will find it a lot harder and more expensive to compete against Walmart in the brick & mortar than it is for Walmart to compete against Amazon in the digital arena.

It is our opinion that the wall between brick & mortar and digital retail will continue to blur. Companies who fail to adapt to these changes will find their share of the market gobbled up by companies who can strike the right balance. We believe that Walmart's size, scale and placement of early initiatives into the omnichannel experience makes them well positioned to be one of these winners.

Qube Insights: Equity Research Snapshots

Equity Research Traffic Lights

Company	Sector	Current Status			
UPS	Industrials	○	○	○	✗
General Electric	Industrials	○	○	○	✗
3M	Industrials	○	○	○	✗
Linde	Industrials	○	○	➘	○
Deere	Industrials	✓	○	○	○
Canadian National Railway	Industrials	✓	○	○	○
Norfolk Southern	Industrials	✓	○	○	○
DowDuPont	Industrials	○	○	○	✗
Caterpiller INC	Industrials	○	○	○	✗
Eaton Corp Plc	Industrials	○	➚	○	○

Qube Insights: Equity Research Snapshots cont.

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
Southwest Airlines Co	Industrials	
Waste Management Inc	Industrials	
Paccar Inc	Industrials	
Jetblue Airways Corp	Industrials	
Pentair Plc	Industrials	
Emerson Electric Co	Industrials	
Johnson Controls International	Industrials	
Old Dominion Frieght Line	Industrials	
Index Corp	Industrials	
FedEx Corp	Industrials	
Finning International Inc	Industrials	
Facebook	Communication Services	
Telus	Communication Services	
Verizon Communications Inc	Communication Services	

Qube Insights: Equity Research Snapshots cont.

Company	Sector	Current Status
IAC/InterActive Corp	Communication Services	
Sprint Corp	Communication Services	
Madison Square Garden C0-A	Communication Services	
Quebecor Inc-C B	Communication Services	
Rogers Communications Inc-B	Communication Services	
Interpublic Group of Companies Inc	Communication Services	
Citigroup	Financials	
Bank of Nova Scotia	Financials	
National Bank	Financials	
Altaba	Technology	
BlackBerry	Technology	
Western Digital	Technology	
Micron	Technology	
Microsoft	Technology	
Accenture	Technology	

Qube Insights: Equity Research Snapshots cont.

Company	Sector	Current Status
Visa	Technology	✓ ○ ○ ○
PayPal	Technology	✓ ○ ○ ○
Seagate Technology	Information Technology	○ ○ ○ ✗
Marvell Technology Group Ltd	Information Technology	○ ○ ○ ✗
Booz Allen Hamilton Holdings	Information Technology	○ ● ○ ○
Texas Instruments Inc	Information Technology	○ ● ○ ○
Broadridge Financial Solutions	Information Technology	○ ● ○ ○
Lam Research Corp	Information Technology	○ ● ○ ○
Alimentation Couche Tard	Consumer Discretionary	✓ ○ ○ ○
General Motors	Consumer Discretionary	○ ○ ● ○
H&R Block Inc	Consumer Discretionary	○ ● ○ ○
Kohls Corp	Consumer Discretionary	○ ○ ○ ✗
Gap Inc	Consumer Discretionary	○ ○ ○ ✗
Macy's Inc	Consumer Discretionary	○ ○ ○ ✗
Las Vegas Sands Corp	Consumer Discretionary	○ ● ○ ○
Ford Motor Co	Consumer Discretionary	○ ○ ○ ✗

Qube Insights: Equity Research Snapshots cont.

Company	Sector	Current Status
Ralph Lauren Corp	Consumer Discretionary	
Royal Caribbean Cruises Ltd	Consumer Discretionary	
Garmin Ltd	Consumer Discretionary	
Norwegian Cruise Line Holdings	Consumer Discretionary	
BorgWarner Inc	Consumer Discretionary	
Nordstrom Inc	Consumer Discretionary	
Vail Resorts Inc	Consumer Discretionary	
Burlington Stores Inc	Consumer Discretionary	
Fiat Chrysler Automobiles NV	Consumer Discretionary	
Ross Stores Inc	Consumer Discretionary	
MGM Resorts International	Consumer Discretionary	
Saputo	Consumer Staples	
Mondelez	Consumer Staples	
Monster Beverage	Consumer Staples	
Conagra Brands Inc	Consumer Staples	

Qube Insights: Equity Research Snapshots cont.

Company	Sector	Current Status
Kellogg Co	Consumer Staples	
Kimberly-Clark Corp	Consumer Staples	
Coty Inc CI A	Consumer Staples	
Walgreens Boots Alliance Inc	Consumer Staples	
Keurig Dr Pepper Inc	Consumer Staples	
Maple Leaf Foods Inc	Consumer Staples	
Loblaw Companies Ltd	Consumer Staples	
NextEra	Utilities	
Agilent	Healthcare	
Barrick Gold	Materials	
Vereit	Real Estate	

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Commissions, management fees and expenses may be associated with investment accounts. Please read the simplified prospectus (if applicable), or investment management agreement before investing. Many investments are not guaranteed and are not covered by the Canada Deposit Insurance Corporation or by any other government issuer. There can be no assurances that an investment will be able to maintain its net asset value or that the full amount of the investment will be returned to you. Values change frequently and past performance may not be repeated.

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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