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Marium Kirmani And StarterHacks

ALUMNI INSIGHTS
Akash Kapoor

Volume 5

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Editor's Letter

Here at Waterloo Business Review we have a three-fold mission: to engage, educate, and empower undergraduates to pursue their greatest potential. Through our online publication, we hope to provide content that will equip students with the business acumen to help them build their knowledge to thrive in a transforming professional environment.

We ensure that every single article that we share with you will provide thoughts on leadership and offer you valuable perspectives that you can apply to your everyday life.

Andrew Dai
Editor-in-Chief

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Our dedicated and passionate team is focused on growing and establishing the Waterloo Business Review in the Waterloo and Kitchener business community.

Waterloo Business Review empowers our team through our emphasis on creative freedom, professional development of research and communication skills, and our culture of entrepreneurship and growth as we nurture members to adopt positions of greater responsibility and leadership.

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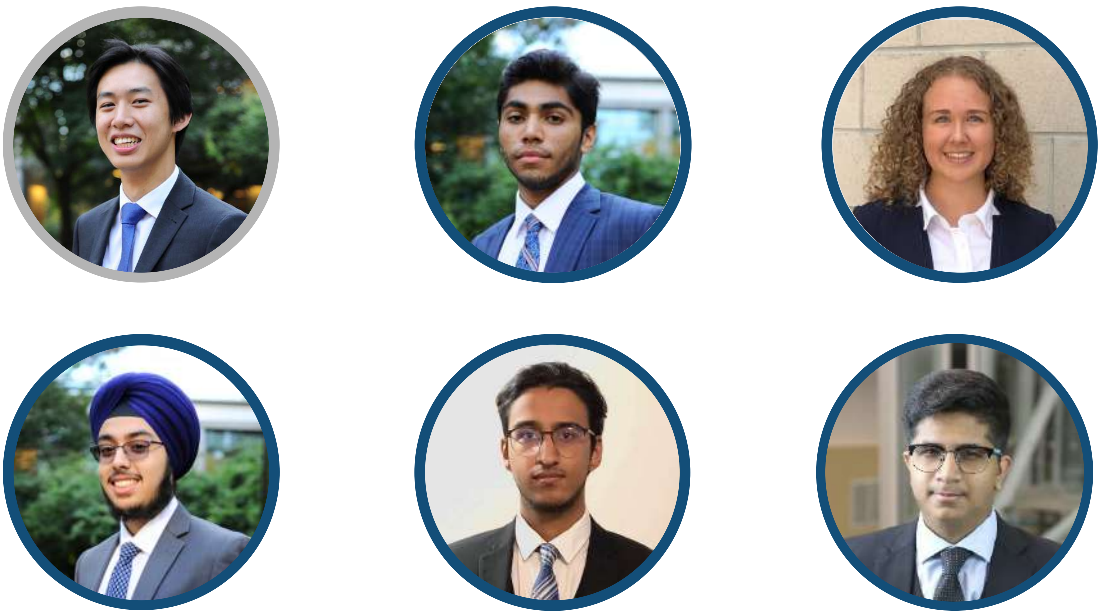

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Business Strategy:

Psychedelics: An Elusive Opportunity

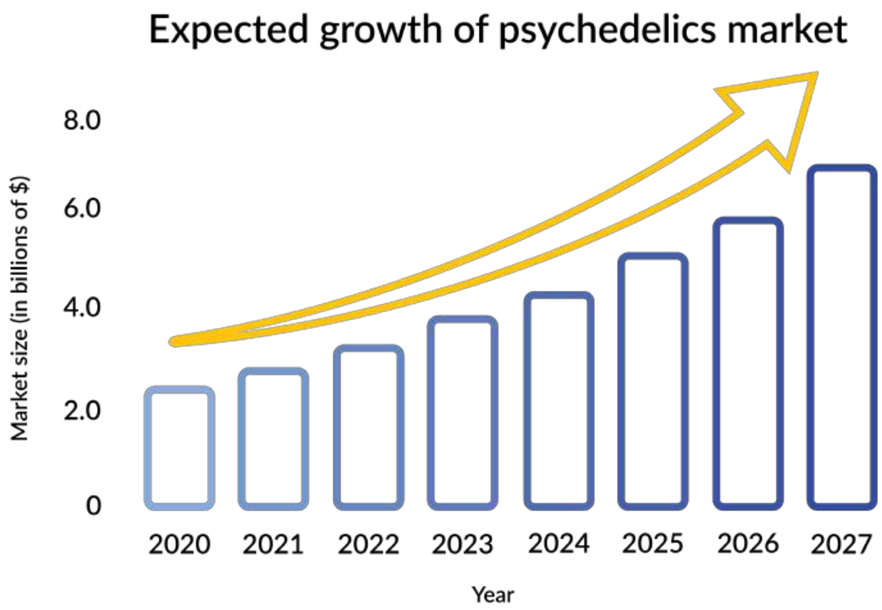
Chiranjeev Beniwal
Anjing Li

Illustrated By
Diane Xiong

Introduction

An avid follower of emerging trends in the venture markets is likely to have heard of psychedelics. After all, psychedelics companies like Atai Life Sciences AG are now worth $2 billion without even earning any revenue. In fact, most companies in the psychedelics space make no money, yet are worth hundreds of millions, sometimes more.

However—what really are psychedelics? In short, they are currently illegal drugs that seem to be on the verge of decriminalization in the United States. During the height of the Cold War, the Central Intelligence Agency (CIA) launched the secretive MKUltra project, where it experimented on subjects with psychoactive hallucinogens such as lysergic acid diethylamide—better known as LSD or acid. This project, which gained notoriety as the "mind control experiments" of the CIA, partnered with several well-known institutes of higher education, and oftentimes conducted illegal experiments to determine if there was a way to control the minds of captured Soviet spies. From a chemical perspective, the substance in the psychedelics would bind with serotonin receptors in the brain, triggering abnormal states of consciousness—hallucinations, or "trips". This was a very useful property for CIA agents, but also for the hippies of the 1960s, who experimented heavily with the use of psychedelics during the counterculture movement of the 1960s, such as at the famous Woodstock festival in 1969. Now, states like Oregon have already decriminalized psychedelics, signaling the increased likelihood of legalization. In fact, a new psychedelics ETF, composed of companies like MedMind, has also been launched. This shows that psychedelics have already entered the financial mainstream. To many, this is simply a continuation of the trend of drug legalization that started a few years ago with the push to legalize cannabis.



+15.8% per year

This trend of normalization within the psychedelics sphere is not surprising at all. Research shows that psychedelics such as psilocybin, ketamine, and ibogaine have immense applications in the pharmaceuticals sector, offering potential solutions for problems ranging from addiction to mental health issues. While psychedelics are still in their nascent phase, they are very likely to become a major driving force within the pharmaceuticals industry due to their wide range of applications. Psychedelics also have potential to revolutionize how we tackle neurological disorders such as addiction, pain, and depression. This will consequently result in great growth in the psychedelics industry over the next few years, as well as consolidation in the currently fragmented sector.

However, while there is potential for huge opportunities within this industry, it would likely be difficult for most investors to effectively capitalize on them due to the difficulties associated with conducting due diligence into psychedelics in the absence of strong scientific and legal knowledge.

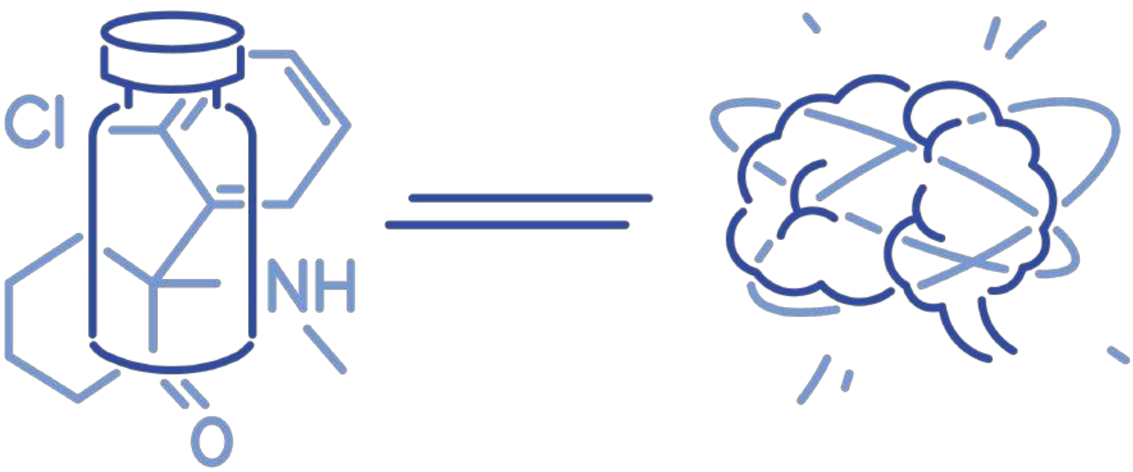
Demand and Market Size

While many of the pharmaceutical applications of different psychedelic substances seem very niche, there is a very large market for their applications. The psychedelics market as a whole is expected to grow at a cumulative annual growth rate of 15.8% from 2020 to 2027, reaching a market size of $7 billion.

Some of the major uses of psychedelic substances are to treat addiction and psychiatric issues. Ibogaine is one such psychedelic compound which significantly decreases addiction problems associated with opioid use. By putting users in a “dreamlike state”, Ibogaine likely increases neuroplasticity in the brain, leading to the formation of new neural pathways. In effect, studies have shown that ibogaine is highly effective in reducing opioid dependency in subjects. One study found that administering ibogaine significantly decreased negative moods, craving intensity, craving frequency, and craving duration; it also retained a lasting effect. Other studies suggested that ibogaine could also be used to treat alcohol and nicotine dependence. This represents a massive untapped market for psychedelics companies that conduct research into anti-addiction medication.

There are an estimated 10.1 million Americans who abused an opioid in 2019, and over 15 million with diagnosed Alcohol Use Disorder. Out of the people suffering from Alcohol Use Disorder, only 7% received treatment and a mere 4% received approved medication. As such, not only is there a huge market for drugs like ibogaine to treat opioid addicts, but it also bridges the gap between the large number of alcoholics in the US and the available treatment options.

In addition, substances like ketamine have applications in combating psychiatric illnesses, such as depression and PTSD. Much like ibogaine, ketamine is also theorized to target the brain’s neuroplasticity. Furthermore, observational studies demonstrate reduced suicidal tendencies in depressive patients.



As the spotlight shines on issues surrounding mental health, there is a huge potential for psychedelics to help these individuals, with an estimated 7.7 million Americans suffering from PTSD and 15.1 million suffering from major depressive disorder. In particular, there is a significant opportunity in the depression treatment market, because there are increasing concerns that the most commonly used antidepressants, such as selective serotonin reuptake inhibitors (SSRIs), may not be as effective as other medications.

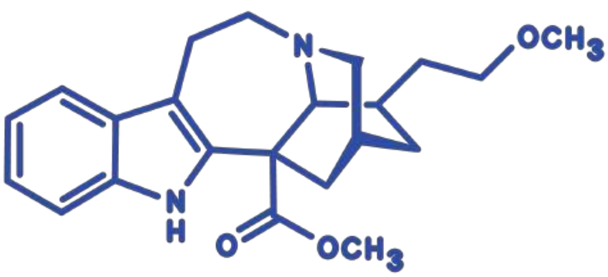
Another key demand segment for psychedelics is pain relief. There are two main types of pain: nociceptive pain and neuropathic pain. Nociceptive pain usually occurs in reaction to bodily harm, such as bruises, burns, and fractures. Neuropathic pain is completely different, and it includes issues like nerve pain, which there are not very effective remedies against. As such, the problem of neurological pain represents a largely untapped blue ocean market, ripe for the novel application of psychedelics. An example of a related area is migraines, for which there are several reported psychedelic cures. The market for migraine cures is predicted to reach $3.5 billion by 2026 due to an expected cumulative annual growth rate of 13.3%.

Company Adaptation

Where there is opportunity, there will inevitably be a large number of companies looking to make the most out of it. Although not yet legalized, there are numerous companies already involved in psychedelics, such as MindMed, Compass Pathways, Mind Cure, and Cybin.

However, since none of the companies are generating revenue, they must bleed cash to fund their research and development (R&D) costs, and they regularly raise shares to meet funding needs. For example, in February, Cybin issued $34.2M in shares, with corporate management saying that they intend to use these funds to accelerate two drug development candidates, development of new tech platforms, and expansion for a major research program. It is worth noting that these companies do not issue debt because they do not have the income to service the interest payments. Some of the biggest spenders on R&D are Compass Pathways and MindMed, spending $19 million and $13.5 million, respectively.

In addition, another major expenditure of psychedelics companies tends to be on acquiring intellectual property (IP) from other companies. Cybin spent over $18 million to acquire several patents relating to pharmaceutical applications of psychedelics from Adelia, greatly increasing the total IP that the company owns. Similarly, MindMed purchased the 18-mexthoxycoronaridine (18-MC) program from Savant Addiction Medicine in the summer of 2019 for $5.5 million worth of shares. This gives MindMed the rights to one of the most innovative opioid addiction treatment programs in the world, with the 18-MC molecule being a synthetic substance based on ibogaine. In general, since psychedelics are still in a very nascent phase, these companies want to ensure they have access to patents for revolutionary substances. This will likely lead to significant acquisitive action in the markets as larger companies seek to expand their IP portfolios. The nascent nature of this sector means that there is enough space for giants and small players alike.

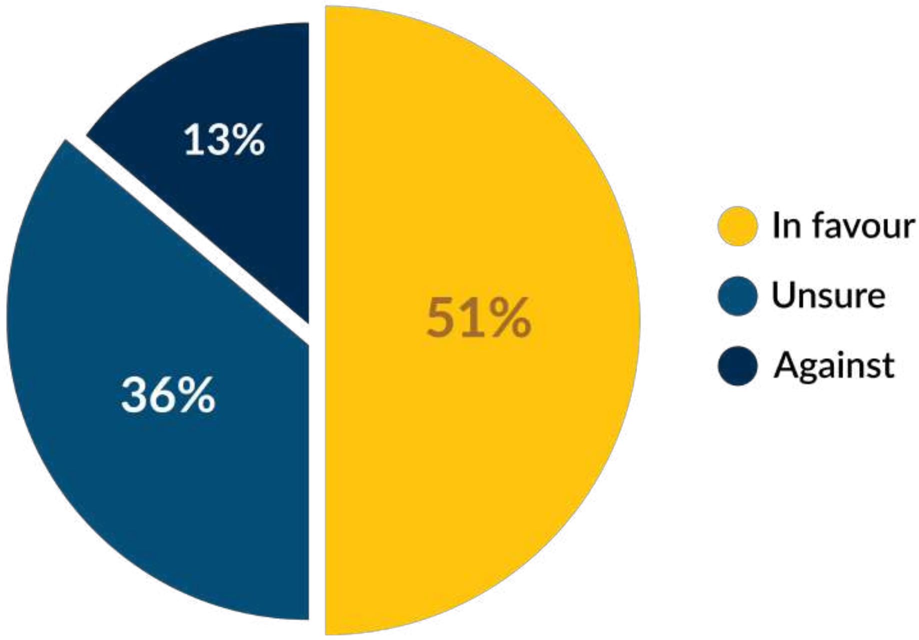


For example, “Big Pharma” companies like Johnson and Johnson have rolled out products such as a ketamine nasal spray meant to reduce suicidal tendencies in depressive patients. As established pharmaceutical giants add psychedelics based medicine to their arsenal, this helps further legitimize the industry. Smaller companies like Mind Cure are planning on investing heavily into digital therapeutics, which would pair up psychedelics-based therapy with smart watches and machine learning. By leveraging the use of technology at an early stage, these companies can achieve general synergies to use psychedelics in a more effective fashion for greater results.

There are also significant opportunities for companies to vertically enter into various segments of the psychedelics supply chain. While the companies that research and manufacture medicines themselves tend to get the most attention, other functions like equipment manufacturing are also highly lucrative and currently unsaturated. For example, while the R&D focussed pharmaceutical giant Eli Lilly has seen relatively volatile profitability over the past five years, the medical equipment manufacturer Medtronic sees similar profitability, but with far more stability and predictability. As such, there is still space for companies to enter into supporting functions within the psychedelics sector, thus helping it flourish and expand its reach across the pharmaceuticals industry.

Additionally, 45% of those surveyed said that they know someone who could benefit from psychedelics based mental health therapy. 70% of these people are also

Adults on the legalization of psychedelics*



*Based on a sample of US and UK adults surveyed by Prohibition Partners

Consumer Sentiment

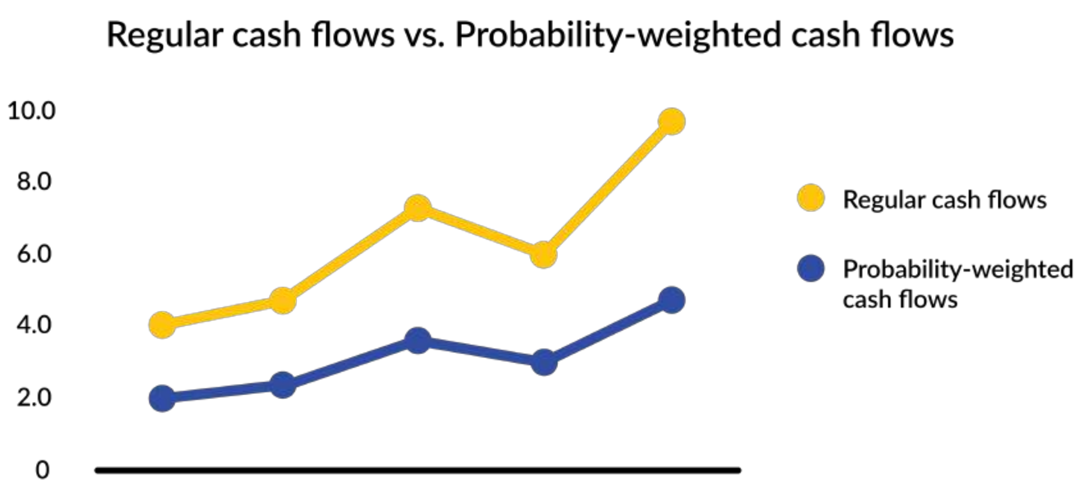
Based on a survey conducted by Prohibition Partners in the US and UK, there is minimal negative sentiment towards psychedelics. 51% of adults are in favour of legalization and 36% are unsure, with the remaining 13% disagreeing with psychedelics legalization.

calling it a breakthrough for the mental health treatment world. While there is still some resistance to psychedelics legalization as a vestige of the "War on Drugs" era, the people who support it tend to be very outspoken in their belief that psychedelics have immense applications in treating mental health issues.

Valuing Opportunities

While it is relatively easy to see why the entire psychedelics sector is well poised for strong growth, it is more difficult to value individual psychedelics firms, which could present challenges in actually capitalizing upon the opportunities available in the industry. A major problem facing investors trying to value psychedelics companies is that the majority lack revenue, and are currently just burning cash raised through equity offerings; as such, the traditional methods of valuation, such as discounted cash flow analysis or comparing EV/EBITDA ratios do not easily work. To gain first hand insight on how interested investors evaluate opportunities in this sector, the Waterloo Business Review reached out to an associate at a psychedelics focused venture capital firm, as well as a former investment banker focused on healthcare coverage.

One of the main issues with psychedelics companies is that they are generally pre-revenue, making it very hard to value them. This usually means that they suffer from binary risk, wherein if their "lead drug" is not approved, they could likely fail in entirety. As such, it becomes very important to attach a probability to different line items and projections. For example, while mature companies can be valued through regular discounted cash flow analysis, it is quite common to use probability weighted cash flow modelling with early stage biopharma startups due to the aforementioned binary risk. For even earlier stage biopharma companies, such as psychedelics in this case, investors will often look at Peak Revenue figures, where maximum attainable revenue figures in the future are multiplied by the probability of the lead drugs being cleared in trials, and discounted to the present. Then, this peak revenue figure could ostensibly be used



instead of regular revenue in EV/Revenue valuation multiples. Apart from just income projections, valuing assets is also quite difficult with companies in the psychedelics sector. With an increased emphasis on their intellectual property (IP), which these companies aggressively try to acquire from one another, there are lots of legal aspects to valuing the companies based on the strength of the IP.

In general, it becomes very difficult for new investors to size up individual companies in the absence of prior knowledge. Without being able to conduct proper scientific due diligence, most investors would not be able to accurately ascertain important probabilities and peak revenue figures. Psychedelics focused venture capital firms usually have teams of scientists and lawyers to help them evaluate the odds that certain drugs will make it past trials, which is a type of expertise an average retail investor would not have. As such, despite the prospect of huge growth within the industry, it may be difficult for average retail investors to be able to get in on the opportunity.

Despite the risks, institutional investors often still pile into psychedelics companies; however, this should not be seen as a sign of encouragement by retail investors.

Venture capital firms tend to invest in convertible preferred equity, which oftentimes provides these investors a liquidation preference of 1x their initial investment, which significantly reduces their downside risk. On the other hand, retail investors would be buying common shares, which have practically no protection against downside risk, which is a significant concern for a whole host of reasons. With psychedelics companies involved in an industry which is still illegal, they will have to wait years for their drugs to pass clinical trials, while burning cash at the same time. In case of distress, the main types of assets that investors would have claim to are the intellectual property, which itself is subject to binary risk. As such, without having downside risk protection like venture capitalists, retail investors have the cards stacked against them in many ways.

> **“...without having downside risk protection like venture capitalists, retail investors have the cards stacked against them in many ways.”**

Conclusion

Overall, with Oregon already having decriminalized psilocybin and there being a push for legalization from prominent investors like Peter Thiel, it is likely that America is on the eve of medical psychedelics legalization, alongside other periphery markets such as Canada. The applications of psychedelics are immense, with the potential to tackle the addiction crisis, ameliorate our treatments for mental health problems such as depression, and revolutionize how we treat neurological pain. Currently, the business landscape for psychedelics companies is very exciting: research and development expenses are increasing, and mergers and acquisitions (M&A) activity is on the rise as well. Psychedelics companies are aggressively raising cash by issuing shares through the equity capital markets. This cash is then being funneled into R&D programs and purchasing other firms for their intellectual property—thus consolidating the industry. Overall, psychedelics seem to be well-positioned to achieve tremendous growth and disrupt the pharmaceuticals industry, and it is up to ambitious leaders and entrepreneurs to make the most of this exciting time in the healthcare sector.

Nevertheless, the true difficulty is how to capitalize upon these opportunities—how can the barriers of entry for laymen investors be reduced in a field dominated by accomplished scientists?

UTIL 683.13 -79.47 VOLUB
DXY 98.05 -0.70 VOLUC
TNX 7.28 -2.23 TRAN
TYH 138.31 2.52 VIX
RLX 1,969.85 -217.43 RUT
DRG -43.58 XES
FTSE REIT
SPMi XSD

SPACs: The Downfall of the IPO

Waleed Khalid
Smriti Sharma

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2,423.44 -287.58
SPH 2,555.50 -128.40
WTI 28.66 -3.07
BRNT 29.71 -4.14
GOLD 1,496.90 -19.80

Illustrated by Victoria Ross

What do Lazard, Shaquille O'Neal and Chamath Palihapitiya have in common? Investment banking! Sort of, at least. In a time of grave uncertainty, another phenomenon has been compounding on our markets. Last year, Special Purpose Acquisition Companies (SPACs) had their strongest year to date, hedging the gap between SPACs and rivalling IPOs- the traditional avenue for companies to go public. With ever-increasing returns, stronger leadership, combined with the influx of retail investors and dry powder, SPACs are becoming the more attractive option for companies looking to go public with mitigating barriers in sight. Soon enough, SPACs will become the norm, and reverse the traditional IPO, rendering them obsolete.

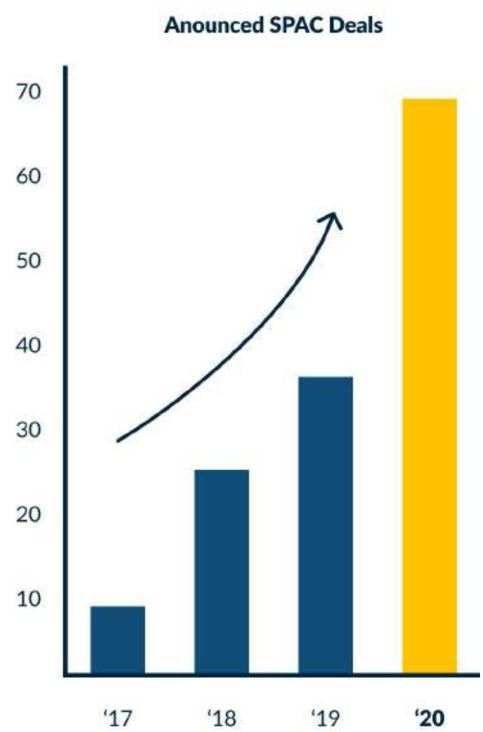
SPACs are a method for private companies to go public and raise money, like an IPO. The main difference between a SPAC and an IPO is that a SPAC first raises money with an IPO, then uses the funds it's raised to merge with a private company. In practice, SPACs can technically be considered a pool or fund of money. For enthusiasts or non-enthusiasts, they are non-operational, publicly listed companies. The purpose of these pools, funds or non-operational, publicly listed companies is to go out and merge with a suitable, private company. When the merger between the SPAC and private company occurs (also known as the de-SPAC), the private company becomes public as a result of the merger; with the SPAC. In the time between the SPAC launching and the de-SPAC occurring, the generally very experienced SPAC management team, also known as sponsors, work on day-to-day operations in pursuit of a merger which like an IPO, provides an exit and entry opportunity for investors and other stakeholders. To summarize an investment in a SPAC, a SPAC through an IPO is the launch of a blank cheque company in which investors can buy shares- then own a piece in the future to be merged with a company that becomes publicly traded, because of the SPAC. Inherently, investors trade and invest in the SPAC sponsor's ability to find and merge with a suitable target company.

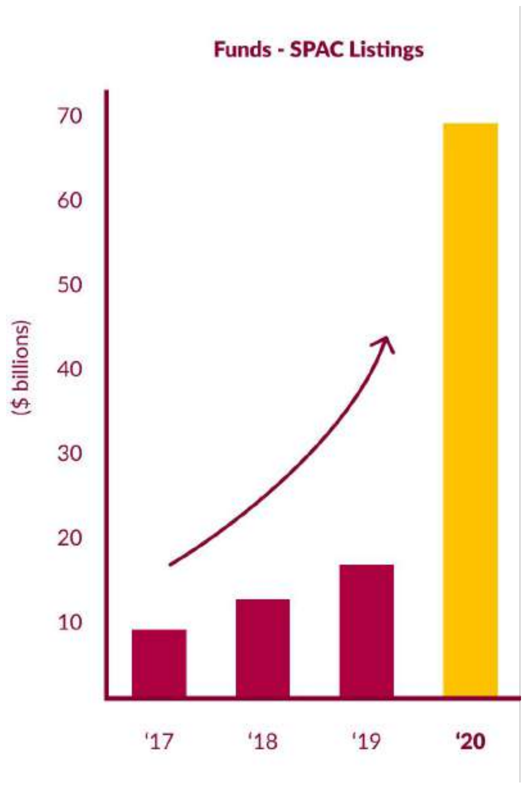
Now if the successful outcome of the SPAC is a merger, why can a SPAC compete against an IPO? At the end of the day, both a SPAC and IPO allow companies to access public markets. A SPAC does it through an IPO, then a merger, whereas an IPO allows private companies to go directly public. Over the past few years, nuances and differences between the SPAC and IPO have highlighted a few key components, which have been magnified as a result of the COVID-19 pandemic. Further accelerating the wider acceptance and takeover of the SPAC as the soon and becoming, the preferred way for companies to go public. The first important component is in regards to timelines. The de-SPAC or merger process, compared to an IPO can be 4x shorter. This is largely as a result of the straightforward process and filing requirements for the merger. Additionally, for the SPAC, as it's just a blank cheque company with no operational history, there are fewer things to consider which can allow the SPAC process to be both quicker and cheaper. For the private company, this shorter timeline for going public can be much more desirable as it minimizes effects on the day-to-day operations of the business, can be cost-effective and is simply less gruelling. Further, and arguably the most important component of a SPAC is certainty. After a SPAC is launched, the search process is dedicated to seeking a suitable company with which the SPAC can merge with. When an appropriate company is found, the sponsor will enter negotiations to set purchase price, conditions and valuation terms. These terms and negotiations give early investors of these private companies much more certainty in regards to the valuation of their investment, allowing their exit to be steady, certain and green. Compared to an IPO, a SPAC for a founder, or early investor of a company provides a lot more security compared to an IPO, which holds massive appeal. Through negotiations, influence and decision making is also extended to investors who get a vote. While sponsors are responsible for searching and negotiating, shareholders of the SPAC ultimately hold the final say.

Through a vote, SPAC shareholders vote on the merger proposal and are given the chance to redeem their shares if the vote follows through. To close the merger, SPACs must be approved by regulatory bodies, like any other public company going through a merger. When finalized and approved, the acquired company becomes public, trading under the ticker of the SPAC.

The process of a SPAC has showcased major benefits over an IPO due to the merger process and differentiated deal-making phase- which has and continues to provide greater value to stakeholders and owners.

Over the past few years changed regulatory requirements have made SPACs more common and attractive. With recent trends suggesting investors also preferring the SPAC over a traditional IPO. Though the first SPAC launched in 2003, it wasn't until 2008’s regulatory changes, that there was a boom in popularity. Before 2008, the ideas of SPACs seemed odd and eerie, abated with poor returns and frequent ties to fraudulent schemes. In 2008 the New York Stock Exchange made changes. Finally, allowing SPACs to be listed on a major exchange- meeting updated conditions to serve governance and regulatory requirements. Specifically, in May of 2008, the SEC approved proposed rule changes





under s. 102.06, of the NYSE Listed Company Manual. Under the new rules, SPACs required an aggregate value of $250m and were able to forgo the requirement of having prior operating histories. In ways, allowing SPACs to appeal to more investors and allowing the investment vehicle to take its shape, more closely resembling what we see today. Other approved rule changes included requirements for proceeds to be held in trust, shareholder approval for acquisitions, and clarity in regards to timelines. These pivotal rule changes brought an increased element of legitimacy and clarity to SPACs, which before were traded loosely on OTC markets. The crucial amendments in rules for SPACs reflected their increasing presence and importance to the SEC, the NYSE and investors alike. Now, over a decade removed from major regulatory amendments, SPACs have become popular and better perceived on markets for the value they can add in the public listing process.

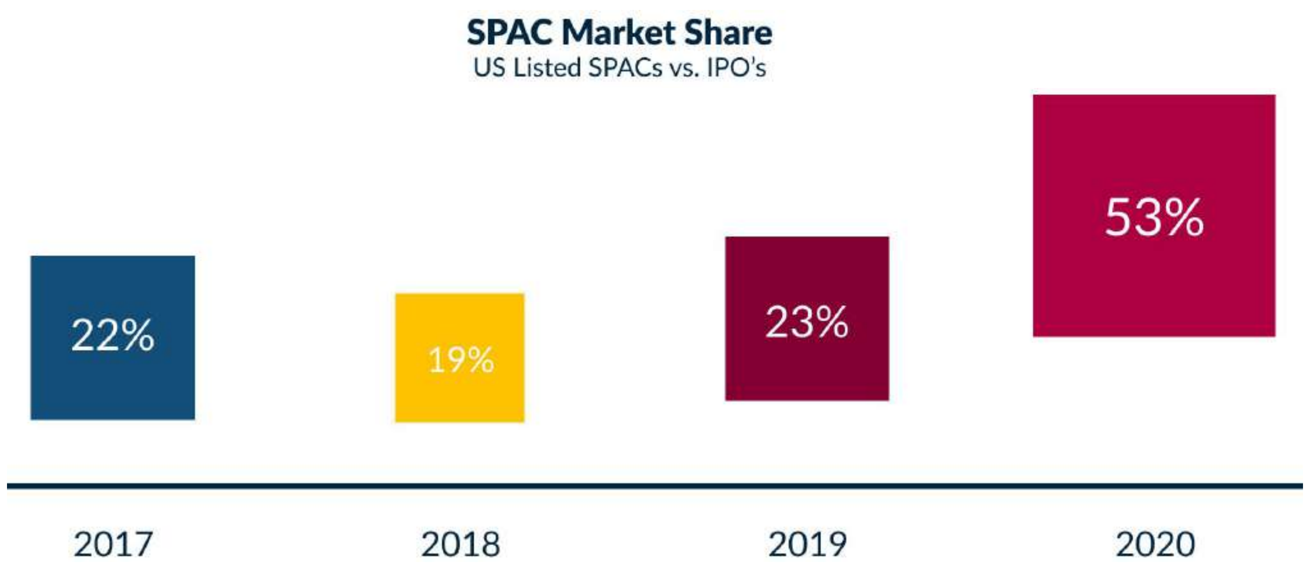
Particularly, SPACs and their outlined process add a few key benefits over an IPO to different stakeholders. The process for companies to go public can be long, strenuous and expensive. SPACs however are significantly quicker than IPOs. The SPAC merger (de spac) can be executed within 3-4 months, whereas preparation for IPOs alone can take upwards of 36 months, often proving to be expensive and exhaustive through the process. With the long timeframe behind IPOs, there is also too much uncertainty and risk for the private company- wanting to go public. In a SPAC, private companies negotiate the terms and underlying value of their business, whereas, for an IPO, a company's purchase price and valuation is outlined or set by bankers which would have a ballpark range- contingent on market sentiment and response on IPO day. This added benefit of certainty, pertaining to valuation is inherently better for employees and shareholders, as well as early investors seeking an exit from their investment in private companies. For stakeholders and owners, having control and influence for valuation terms is an incredible incentive to use a SPAC over an IPO. For stakeholders and owners, the incentives don't end here. SPACs also have more flexibility in regards to liquidity. Unlike IPOs, SPACs don't have the same lock-up period. Generally, IPOs follow a 6-month lock-up. For SPACs, who can and can't sell shares is open to negotiation between the SPAC and respective target. For investors, this flexibility is enormous and hasn't exactly been replicated or provided by IPOs. Overall numbers and deal values with

SPACs can also be more favourable, as SPACs have the potential to provide both faster and greater access to capital via PIPEs (Private Investment in Public Equity). PIPEs are private investments in public entities which SPACs have turned to recently. For companies, or SPACs that want to raise money quickly in a cost-efficient manner, PIPE transactions have been the go to- sometimes helping seal the deal for SPAC mergers. Notability, Venture Capitalist, SPAC sponsor and founder of Social Capital, Chamath Palihapitiya has funded 8 SPAC deals as a member of the PIPE. The PIPE allows funds to be raised but also allows both notable and influential investors such as Chamath, to hop on board. Ultimately, today's version of a SPAC, which can raise money through multiple means and points, provide liquidity and security for stakeholders and incentivize the deal-making process, opens the possibilities for SPACs going forward.

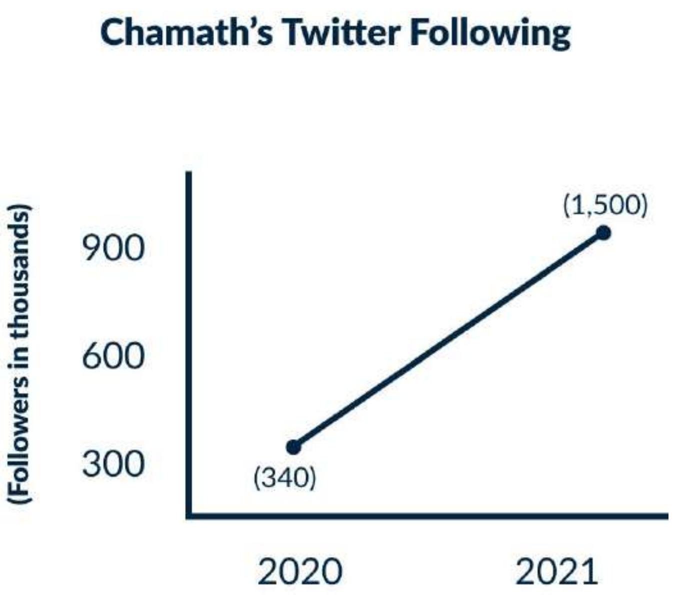
For the acquisition company, a SPAC can also serve as a next step and opportunity for strategic partnerships to form, which can prove to be valuable over the course of time. Generally, sponsors pursue SPAC investments on the basis of their insight, value, experience and track record in specific sectors as sponsors tend to be successful and accomplished in their professional careers or respective areas of expertise. Understanding what a SPAC investment (pre-merger) really is, it is a bet on the management team of a SPAC moreover, their ability to find a target and close a deal. SPAC investors essentially bet on the relevant industry knowledge, experience and negotiating expertise of SPAC sponsors and management teams to source deals. Steve Fletcher, CEO of Explorer Acquisitions, an advisor and backer of SPACs, states: “With the recent proliferation of SPACs, we believe that investors will increasingly focus on SPACs that have deeply experienced and talented operating executives. These executives can truly help companies after the SPAC business combination.” More recently, sponsors have played a bigger role in their acquisition companies by becoming involved in the day-to-day business of the companies, such as by serving on the BoD. Looking at Chamath Palihapitiya again, he served as the Chairman of Virgin Galactic after taking the company public in 2019 through a SPAC deal, “I remain as dedicated as ever to Virgin Galactic's team, mission and prospects,”. In 2019 alone, 76% of SPACs were sponsored by industry executives with proven histories, prior M&A experience and exits for public companies. Further, expertise and experience are growing in the SPAC market. As of 2019, 75% of industry exec-sponsored SPACs had a sector focus with the sponsor teams today, being backed by accomplished professionals with track records of successful value creation and proprietary deal sourcing networks.

On the flip side, a SPAC is also beneficial for the sponsor. With private companies seeking optimal partners who fit well, sponsors are also further driven by their own incentives. Sponsors generally receive 20% of founder shares (promote) in addition to warrants, after paying minimal amounts for the said promote. This minimal risk and the high upside for SPACs have lured many banking and industry execs to try their hand at SPAC sponsorship, establishing some as SPAC giants. Prominent SPAC sponsors include former banker Michael Klein, former Facebook exec Chamath Palihapitiya and notable hedge fund manager, Bill Ackman. These SPAC sponsors have developed followings and admiration for and behind their investment strategies, insight and performance. Further leading to greater recognition among retail investors for SPACs as a potential investment.

Recently, public perception of SPACs has been favourable, specifically because of access. Access to information, sponsors and opportunity. Social media, the democratization of investing, and access to markets have allowed retail investors to enter and better understand investment vehicles and opportunities that exist- which they wouldn't have been able to in the past. Social media has been vital for

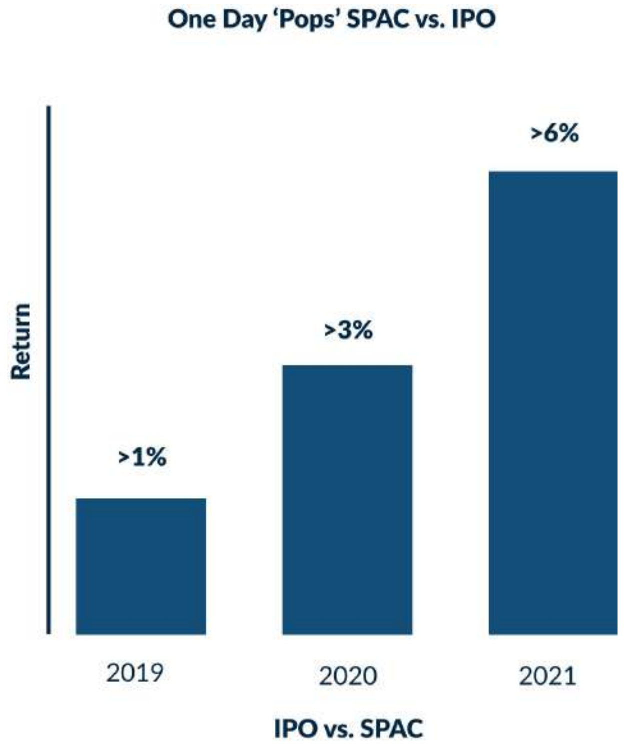


both SPAC management teams as well as retail investors with platforms such as Twitter and Linkedin being among the most important social media channels for investor relation strategies. One person who’s amassed quite the following and who's SPAC deals have fared fairly well over the past year is Chamath. In less than a year, Chamath’s following on Twitter has increased 4-fold!



Unlike SPACs, with IPOs historically, retail investors watch from the outside and miss out on preferred IPO pricing- for which institutional and accredited investors benefit and capitalize on greatly. Now, SPACs allow anyone to getinvolved, at perhaps more attractive entry points, while also offering additional investment opportunities in late-stage private companies. With added warrants and the opportunities for shares to be purchased at preferred pricing (now accessible to retail investors), the allure to SPACs is substantiated by the generated risk and reward which is fair game for anyone. In addition to the investment access, SPACs and sponsors provide a certain level of transparency and interaction between management teams and investors. Typically, for IPOs, bankers conduct roadshows for institutional investors- something inaccessible to retail investors.

With the rise of social media and access to information, market movers and sponsors, SPACs have gained the support of retail investors- now providing new opportunities for the coming years for both the SPAC and retail investors. Though SPAC returns and investment horizons are not always aligned, the access to knowledge and encouragement to invest in public markets warrants a new era of opportunity. One in which retail investors



On average, newly listed IPOs in 2020 saw an average one day return or **"IPO Pop" of 38%.**

can invest in and access new opportunities, which wouldn't have been possible or as seamless a few years ago. With the volume of retail investors putting their trust and funds into SPACs, along with the accessibility, transparency and access to SPACs and information- soon enough, the IPO will no longer be relevant, needed or preferred. The SPAC spectacle on the markets today is the beginning of the downfall of the IPO.

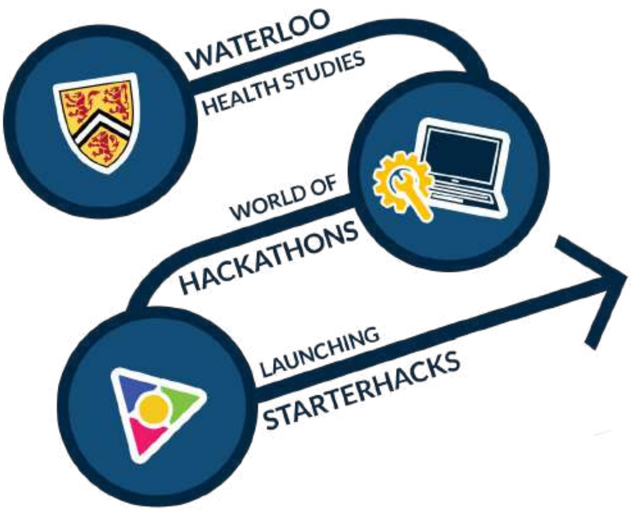
Exclusive Interview:

Filling The Hacker Niche: Marium Kirmani And StarterHacks

WBR: All founders build their missions around a problem they first identified. Could you tell our readers more about your own story, and the background and mission behind Starter Hacks?

I was originally an international student, and came to Waterloo to study health. My initial goal was to go to medical school, but during undergrad I got really into the tech world because most of my friends are computer science students. During undergrad though, I got roped into going to hackathons as a hobby.

As I went, one of the things I started to notice is that there was this idea that you have to be a computer science student to be useful in a hackathon. For example, when other hackers found out I was studying health they usually preferred to work with people from more technical backgrounds. That was kind of disheartening as somebody trying to explore the tech world. But I'm a very stubborn person, so I was going to do it anyway. There were also very few women there, so that you could count on two hands the amount at opening ceremonies. Coming from a health program that is relatively female-dominated, it was interesting to see that there aren't that very many women in tech.



I also started realizing there are different elements that can be done differently. In my fourth year student, as a residence don at MKV, there were many students I worked with from an engineering background. Interestingly enough, they viewed hackathons as a magical event to apply to, but could never get in. From there, I realized this was very counter-intuitive because they were designed to allow students to explore new ideas casually over the course of a weekend. As a result, I started thinking how I could change this narrative of hackathons being this intimidating place.

All in all, I wanted to fill in a niche where students could focus less on the material prizes they left the hackathon with, and focus more instead on what students could polish up and take away to the next hackathon. Eventually when we did send out applications, about 50% women did apply, which was a welcome sight, as we wanted it to be an event to meet a diverse range of people with like minded interests.

StarterHacks focuses specifically on the theme of first-time hackers. What inspired this focus and how has this played into the challenge and the outcome of the competition?

The biggest misconception people have about StarterHacks is that we're in competition with other events like Hack the North. However, our philosophy has always been to feed the people that will eventually go onto a Hack the North type event. We have a beginner-focus.

To begin, we conducted a lot of research about how to make things more comfortable for hackers. Students often felt very unprepared when they came into hackathons and often had to paddle through.

With StarterHacks we divide people into three types of roles, each with their own mandatory workshops relevant to their streams to break down each area a little bit. For example, we've got a design stream workshop where you learn how UX works, and what tools you can use for it. There's also a business stream where you learn about market validation and pitching, which gives students a baseline of confidence before hacking.

Some other ways we differ include we try to create an environment that's friendlier and less competitive, and also focus on less materialistic prizes such as touring Amazon's office, shadowing a senior partner at Deloitte, or subscriptions to Adobe.

On the attendance front, about 50% of students are engineering, but the other 50% are all over the map. We've even had students as young as elementary attend, to students pursuing PhDs.

What was the biggest challenge when it came to launching your organization?

Initially there was a lot of pushback when finding place in the Waterloo ecosystem. We had to find where we fit in, which faculty was the best to support us, and whose goals aligned with ours the most. It was tough to navigate through the politics. From our initial idea, we had five weeks to organize everything, from buying food, to marketing. It was a stressful time for sure. A huge part of managing an organization is working in a team. For example, finding a team who will work for free always poses its own unique challenges as well. Specifically, people tend to drop off things if they have other priorities, so we had to learn how to get them to prioritize this event. Overall though, encountering these problems was a huge learning experience, as these themes will come up regularly in the workplace.

Do you have any advice for students and young women interested in pursuing their own entrepreneurial interests?

Just do it. Put on some Nikes and do it.

Start by talking to somebody in that market. For example, if you're making an app for a certain target audience, talk to them about things you could improve. If you're trying to solve a problem, don't only go off of intuition. Make a product for the people.

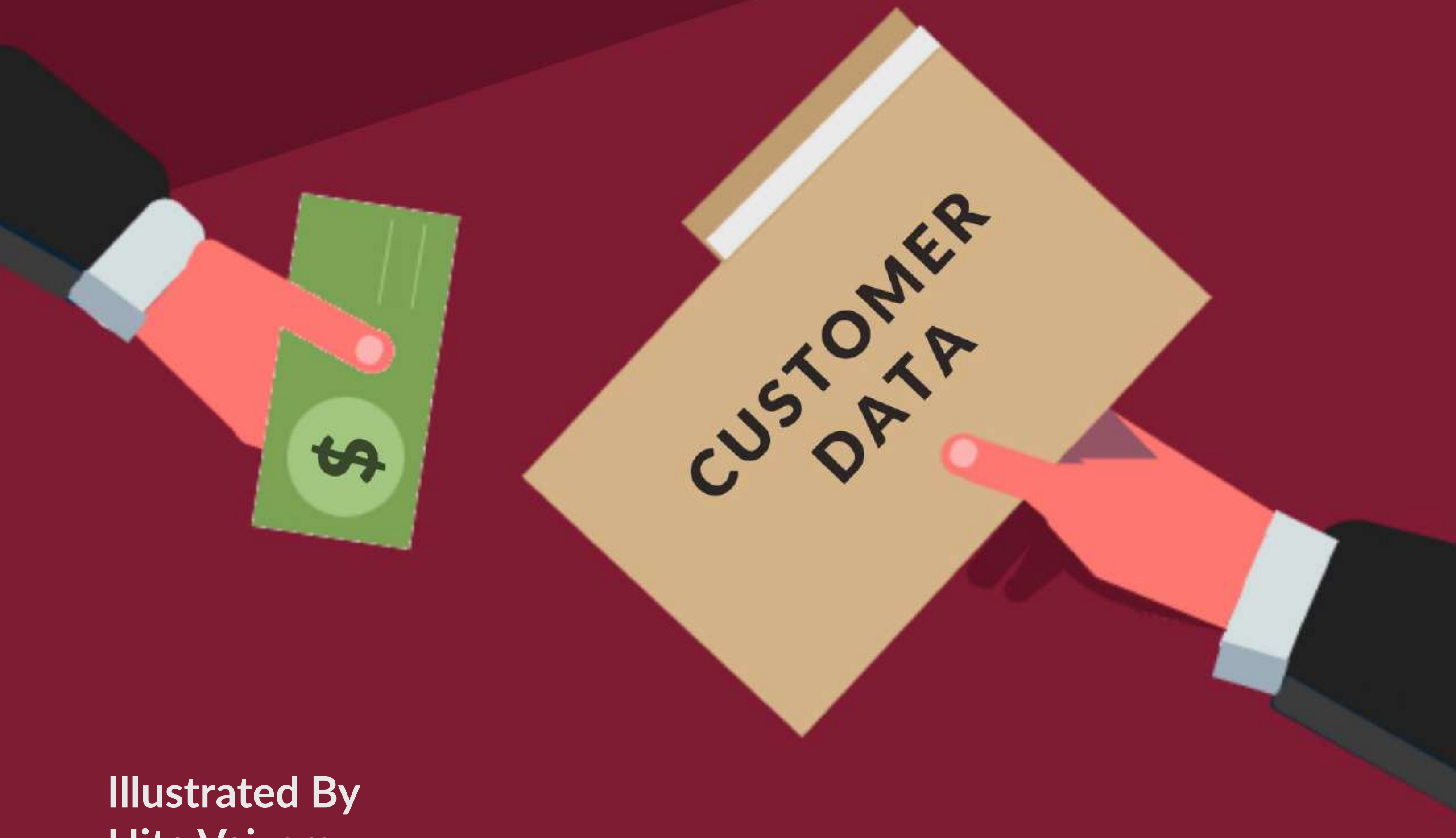
Have some resilience. There will be a lot of nos. In fact, there will be 1000s of nos for every yes. You have to pick yourself up, and don't let your ego get in the way. You might think you have the great idea on your own, but having a co-founder is also a game-changer, and is one of the best ways to receive ongoing feedback from others.

Get yourself out there. Lots of people underestimate entrepreneurship and think it's going to come easy, but it's never easy. Nowadays entrepreneurship is hyped through social media with media personalities like Gary V. Invest your time by going to networking events, or just meeting people.

Technology:

Are Businesses Being Valued Properly?

Katrina Hermanns
Leo Chen



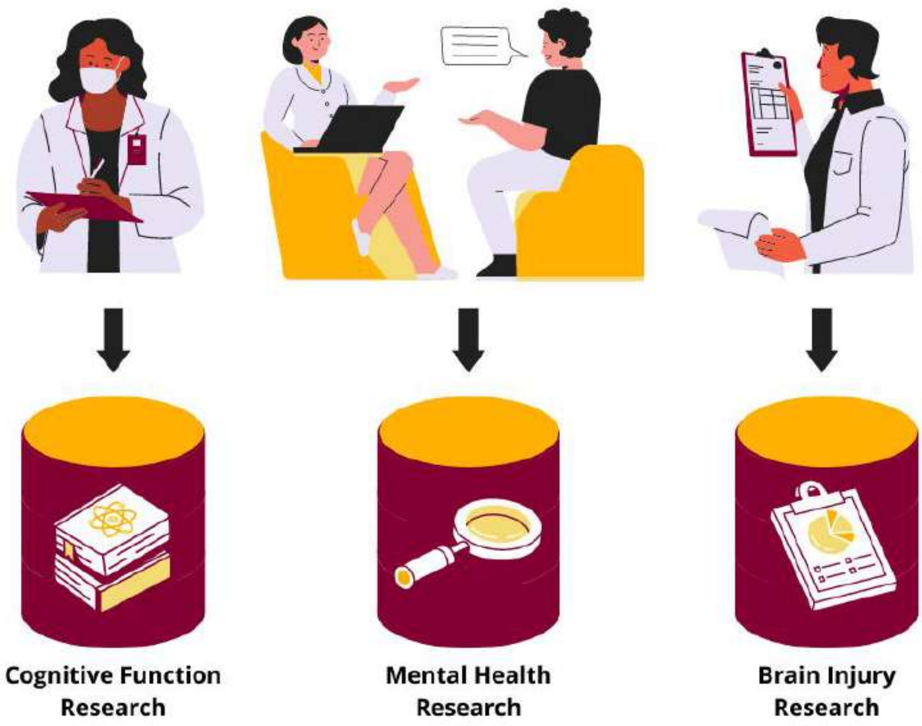
Illustrated By
Hita Vaizers

Introduction

Our interactions with the world are increasingly dependent on personal data. We expect our food delivery app to know our location, our Google searches to return exactly what we are looking for on the first page of results, and our doctors to have access to our entire medical history during a visit so they can make a timely and accurate diagnosis. These expectations allow companies like Uber, Athenahealth, and Google to become the owners of massive amounts of data, as they collect, store, and process the information. MIT's Sloan Review conducted an investigation that estimated that the volume of data being stored by data-centric companies is increasing by 40% each year (Short & Todd, 2017). Google alone is estimated to process 3.5 billion searches per day, which equates to 20 petabytes of data (Heshmore, 2017) (for comparison, that is approximately one million times the amount of data that can be stored on your smartphone).

For data centric companies data is not only useful to service their own technology, but it is also a secondary source of income and a contributor to the company's value. These companies have physical offices, labs, and equipment, which are obvious tangible assets that can easily be assigned a monetary value based on comparable market prices. However, the true value of data centric companies lies in their data, which is less tangible and harder to properly value.

Data is the largest overlooked intangible asset in the current technology market. Although the importance and value of data has come to light in recent years, effectively valuing data is not as simple as finding an equivalent asset or transaction to derive its value from. Society's current view and treatment of data is preventing it from being correctly valued, as it is not currently treated as a unique entity, nor do transactions involving data involve the assessment strategies and security measures that other high value assets receive. The true value of data will only be understood after society fundamentally shifts their understanding and treatment of data. However, this shift requires changes in human behaviour and technological infrastructure, which are elements that are often slow to change.



Increasing Value Through Structured Sharing

Proprietary data provides companies in certain sectors with a competitive advantage. However, when data is "shared" like any other commodity, it becomes easier to place a tangible value on. Although this idea is applicable to many different industries, especially e-commerce data, traffic data, and urban development data, healthcare is an excellent candidate to demonstrate this point. Healthcare systems generate a high concentration of publicly funded data through research activities and trials, and this data often resides in "fit-for-purpose silos" where it is only applied to the direct research it was collected for, and not used for any other applications (Deloitte, 2021). However, technology companies like Google have shown that this data is valuable in parallel research applications through their use of GoogleFit and FitBit data to further advance research within Google Health (Lomas, 2020).

Breaking down data silos and maximizing the usefulness of these datasets can be facilitated by data marketplaces. Data marketplaces are places where existing data sets can be purchased by teams who are looking for data. The marketplace not only facilitates the connection, but creates a tangible, recorded transaction that places a direct monetary value on the data (Deloitte, 2021). As more of these transactions happen, it gets easier to place a monetary value on data as there are comparable market prices from past transactions to base the price of current offerings on. These marketplaces also increase the value of the data for the initial holders, as the data is not only valuable in the context of their research, but also has a secondary, monetary value that can be realized in the marketplace (Deloitte, 2021). Additionally, data marketplaces lower the barriers of entry to markets where collecting the required data is expensive and time consuming, as new entrants can purchase existing data instead of completing their own data collection processes.

The idea of data marketplaces has started to emerge in the Canadian healthcare system, as Canada's Digital Technology Supercluster has funded the Secure Health and Genomics Platform, which will create new digital capabilities for using health and genomic data to improve the diagnosis and treatment of patients (Deloitte, 2021). The focus will start on cancer and difficult to treat diseases, then expand into other areas of clinical practice, health, and wellness (Deloitte, 2021). The aim of this platform is to make data easier to find, share, and develop into insights that improve the health and wellness of patients (Deloitte, 2021).

“Although these data marketplaces allow for monetary profits to be realized from data sets, the sharing of data also benefits society as a whole.”

Data sharing facilitates increased innovation by breaking down barriers to entry, as well as allows for faster innovation as the data collection process doesn't necessarily need to be conducted as often.

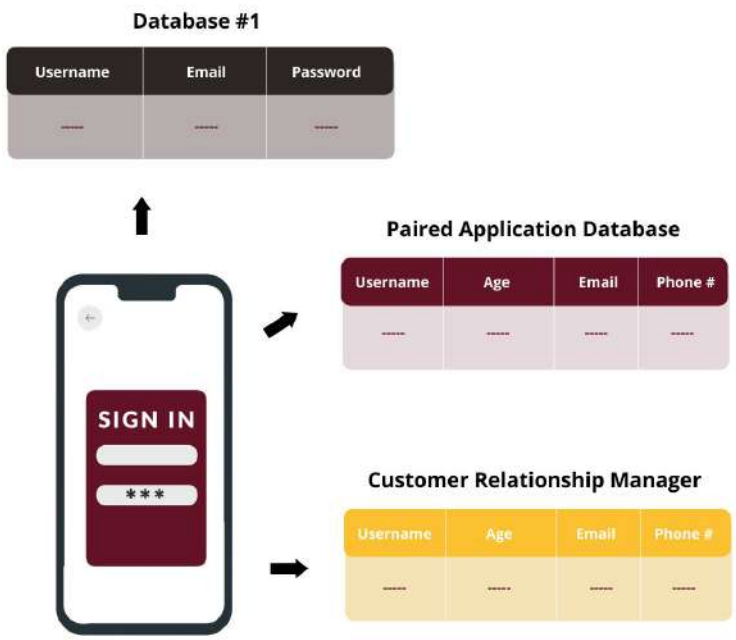
The most obvious example of how sharing data can expedite innovation lies in the response to COVID-19. A direct example of a transaction where data was treated as a valued asset, equivalent to money, was in Israel's deal with Pfizer where an agreement was reached to share data in exchange for the opportunity to vaccinate their citizens before many larger and wealthier countries (Laurent, 2021). Through this transaction, Pfizer gained access to “aggregated epidemiological data”, which allowed them to monitor the effectiveness of their vaccine in real time, and determine the efficacy of their vaccine against COVID-19 variants faster, and with more confidence then their competitors (Laurent, 2021).

In the case of the COVID-19 pandemic, within and across nation sharing of data allowed for a quick response, more accurate tracking, as well as record breaking vaccine development. Covax, a group of 92 countries who have agreed to collaborate to accelerate testing and vaccine development, formed the ACT Accelerator which is directly aimed at facilitating the sharing of data among researchers and manufacturers ("Covax", 2021).

Although COVID data was not shared through data marketplaces, it demonstrates the power that lies in breaking down the data silos that currently exist in society. Data marketplaces will not only provide a structured, centralized location for businesses and research teams to share data, which can help accelerate innovation, but also involve the exchange of money. As the number of transactions for data increases, it will become easier to associate data with a monetary value based on historical transactions or transactions made for similar data assets, creating a clearer, more accurate valuation for data as an asset.

The Data-Centric Development Approach

Zooming into how data is handled at an institutional level also reveals areas where the treatment of data needs to change to allow it to be valued correctly. Currently, the most popular approach in software



Domain-Driven Development

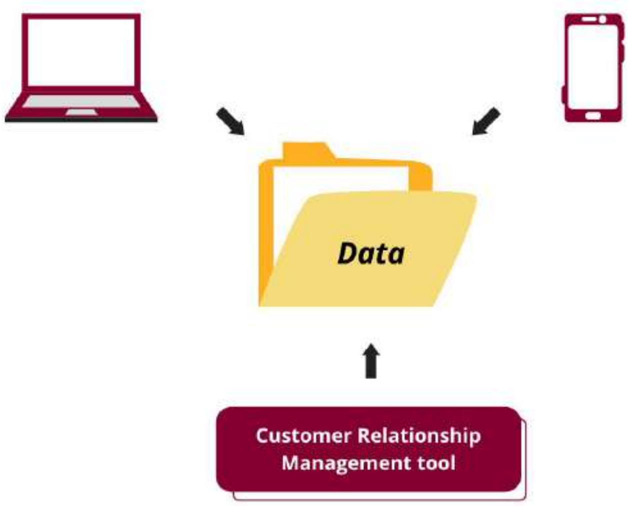
development is domain-driven development. This process places logic at the centre of the application, which means that the application is designed and built around business logic. A simple example of this is the log-in process to a social media site. When building the log-in process, developers would have focused on the specific text boxes and buttons that you need to be able to log in, as well as security measures to prevent other people from accessing your account. However, by focusing on business logic, the domain-driven development paradigm makes storing multiple copies of data a common practice. Continuing with the earlier example, this means that multiple copies of your user name, first/last name and phone number could be stored within the application, and developers are free to make more copies of it at any point they feel is necessary.

The fundamental problem with this approach is that the database and the data that it contains are not treated as unique entities. When a company develops multiple applications or products, each one has a unique database, where data may be copied, exported, imported or changed at will. This degrades the value of the data, as many copies can exist in various, inccurate states (not updated, updated a year ago, or fully up to date). Additionally, this paradigm allows for data to be copied as many times as the development team sees fit.

A thought experiment about data copying that has recently emerged compares data to other valuable assets such as cash or gold. In order to preserve the value of assets like cash and gold, they aren't freely copied, in fact it is illegal to produce fake currency. If the true value of data is to be realized, it also needs to be treated as a valuable asset that should not be freely copied. This realization is a significant problem for the software community, which has been freely copying and moving data in order to extend existing products or build new ones.

A solution to this problem lies in a fundamental paradigm shift. The

Data Driven Development



data-centric development approach encourages developers to treat pieces of data and the database as a whole as a unique entity. This approach is achieved by placing the database at the center of the application(s) and requiring that developers store all of the data in one location. This also prevents the need for copying data, and completely avoids the issue with inaccurate data, as there is only one copy at any given time. This approach means that data is treated as the primary and permanent asset, such that it is a Single Source of Truth (SSOT).

This paradigm allows development teams to adopt an overarching philosophy that treats data as the high value asset that it is. This psychological and practical shift allows the true value of data to emerge, as it becomes an asset that needs to be carefully managed and respected by its holders. The data itself gains a higher value as there is only one copy, and the paradigm prevents any further copying or manipulation.

The data-centric approach also increases the value of the data for consumers and stakeholders within the company, as the stored data becomes more reliable and accessible with this approach. As a SSOT, the data is easily accessible since it is stored in one location, and there is no longer any question about which database is the most representative. Additionally, there is no doubt that the data is up to date as any updates or changes are made instantaneously to the SSOT, which removes the update pipelines or nightly chron jobs that exist in domain-driven development. Overall this approach allows for a faster, more accurate, and secure product for consumers, and more accurate metrics for company stakeholders.

Realizing the Value of Personal Data

Although awareness around internet safety and the sharing of personal data has risen in recent years, the general public is still generally unaware of the true value of their personal data. This has been one of the contributing factors that allows corporations to treat data in a poor, unprotected manner, as data providers are not educated enough to advocate for proper treatment and storage of their information. The increased volume and complexity of data flows has strained the traditional knowledge-and-consent system and left individuals without meaningful control over their personal information and privacy (Government of Canada, 2019). One solution to this is increasing the government's investment in education and legislation to ensure that data is treated as the high-valued commodity that it is. Although legislation does exist to disclose data collection and storage policies to consumers, the onus is placed on the consumer to understand and accept this information, which is called a Privacy Self-Management approach (Government of Canada, 2019). The required privacy information is often communicated in long and complex formats, which consumers neither have the time or legal training to understand (think about the privacy agreement that you click 'I Accept' on before reading when you access a new digital product) (Government of Canada, 2019). The Canadian government has recognized this problem, and has recommended clarifications for the existing Personal Information Protection and Electronic Documents Act (PIPEDA) to improve both education and protection efforts (Government of Canada, 2019). Educating consumers about the value of their data, as well as how it could be used by corporations would allow them to make informed decisions about their personal information, as well as hold corporations accountable. Additional legislation can also help to ensure that corporations are communicating with consumers in an appropriate manner, which also contributes

to helping consumers make informed decisions.

Overall, increasing education and legislation around the treatment of data will help the true value of data to be recognized. Consumers would be able to make better decisions about when to divulge their data, and corporations will be kept accountable for the correct treatment of the given data. Although this may decrease the amount of data that consumers are willing to provide, it allows for the proper treatment of data, and gives consumers the control they should have.

Conclusion

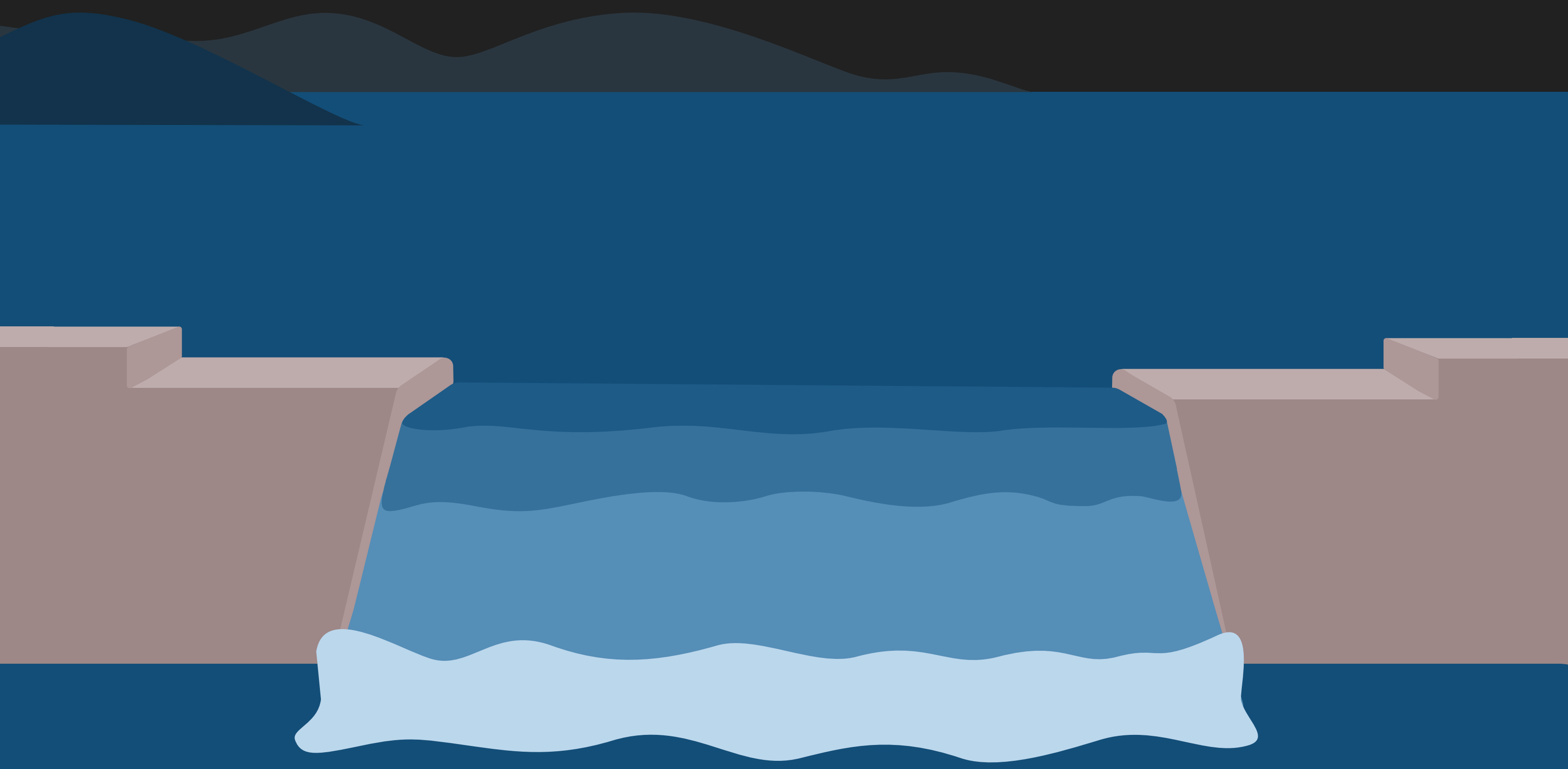
As society evolves, more aspects of our everyday lives become dependent on data. As our dependency increases, our knowledge, perception and treatment of data needs to align with data's importance in order to allow for its true value to be realized. This will allow for data to be valued more accurately and easily, as comparable transactions will start to exist. The first step to properly valuing data is to break down the fit-for-purpose silos that exist in research based industries through data marketplaces. Placing high value data in marketplaces not only allows the owner to realize a monetary value for their asset, but also creates a transaction history which can help to value other data sets in the future, which further increases the accuracy of how data is valued. The second step to properly valuing data is through a fundamental paradigm shift in how software developers build products. Shifting from a domain-centric to a data-centric approach allows data to be treated like other high-value, unique assets, such as cash and gold. This approach makes data an asset that needs to be carefully managed and respected by its holders. Additionally, the data itself gains a higher value as there is only one copy. The final step in properly valuing data is education and legislation to give consumers the information and power they need to make informed decisions. Being informed about the value and corporate use of personal data will allow consumers to advocate for the proper treatment of their data, and allow them to think about their data as they would think about other important assets.

Combining these three changes requires time and effort from many different parties, and will require perseverance and determination from leaders in government and industry. However, the effort to properly value data will result in the value of data centric companies to be accurately understood, and consumers will benefit from additional quality, security and control over their personal assets.

Business Strategy:

African Renaissance: The Dark Side of The Green Revolution

Muhammad Sadiq



Illustrated By
Devena Mohabir

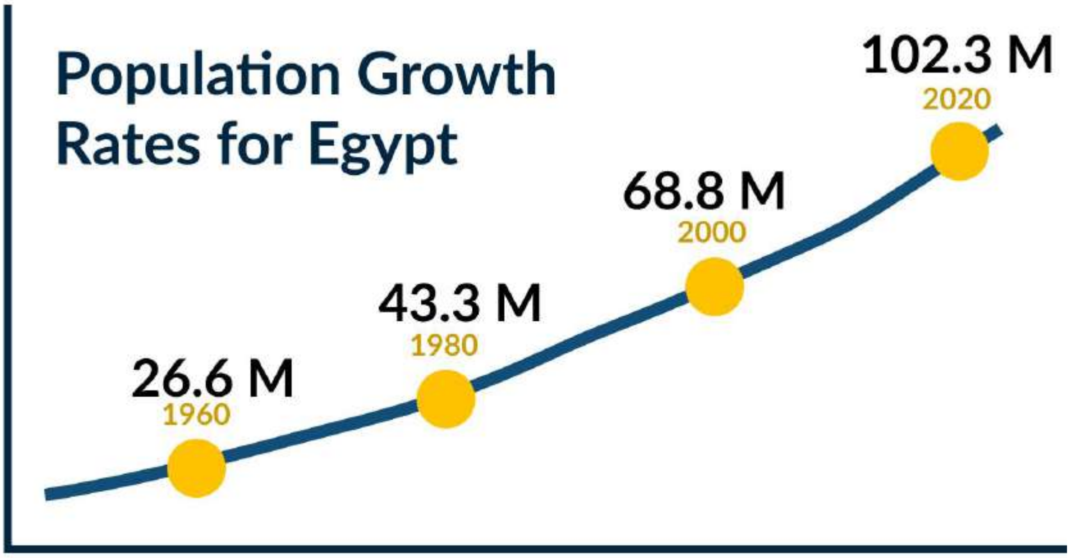
Introduction

When hearing the phrase “energy conflicts” the mind immediately races towards fossil fuels and the issues facing their consumption. From climate change to human rights concerns, the challenges faced by the global consumption of this commodity are well documented and understood. The solution proposed is the transition towards the green economy. This would involve generating energy sourced from sustainable processes like Nuclear or renewables like Solar.

The electrification of consumer products and industrial processes will divert from the use of nonrenewables fuels to make economic activity like truck transportation green. However, what isn’t explored is the conflicts emerging from this transition. Many advocates will ignore or neglect the potential short-term contention due to the perceived long-term gain from renewables. Similar to the geopolitical struggles involved with the petroleum trade, the clash of civilizations has always been about resources. Ethiopia’s Renaissance hydroelectric dam project threatens Egypt's food supply through the depletion of the historic Nile River.

History of Egypt

One of the oldest civilizations in history, the Egyptian people like many ancient civilizations formed around river banks. The Nile has historically been the site for the best agriculture in the world providing the food necessary to feed Ancient cities like Rome and Constantinople. One main reason this project has become a topic of nationalistic pride is due to the history of the natives. Egypt has just recently been ruled by Egyptians. From Alexander the Great to various Sultanates to more recently a protectorate of the British Empire, Egypt and control over the Nile and Suez have been a strategic goal of any Global Empire. For centuries the locals have been subject to policies and visions of their conquerors and have not seen much



of their resources and wealth enrich them. This resentment allowed in 1952 a group of Army Officers to overthrow the Pro-British Albanian Royalty and establish a republic. One of many major events in the 20th century was when the Republican government tried to reclaim the Suez Canal for their people. The canal has a unique importance and was symbolic to the British and French, who were the majority shareholders. This triggered what would be known as the Suez Crisis in which Egypt would be invaded for merely asserting claims to land and infrastructure they built.

Traditionally, Egypt's strategic risks involved invasion for its Eastern or Northern Borders however this has Egypt refocusing its attention and resources on its African and Southern Borders. This mindset along with their history is important in understanding the actions of governments in foreign policy.

History of Ethiopia

African History is largely ignored in most curriculums in the West. The covered history typically begins during the 19th century when the Great European powers decided to divide the continent among themselves into Colonial possessions. The only modern African nation to be exempt from this was Ethiopia. Surviving conflicts with the Italian Empire into the later 19th century, the country remained the only uncolonized African Country. The nation may have survived external pressures however the country itself has never been truly unified until recently. Ethiopia is incredibly diverse ethnically; the current largest ethnic group only comprises 34% of the population. Along with the geography and mountainous terrain in the country, this has made the process of Federalization incredibly difficult; limiting economic opportunity. Under the new administration of Abiy Ahmed, these tensions have seen a relaxation with even a peace deal signed between neighbouring Eritrea however recently another armed conflict broke out within natives of the Tigray region. This demonstrates that the government coalitions aren't permanently fixed and significant political risk remains if foreign investments are considered. That is why a large part of the funding of the dam was fronted by the people; making the conflict with Egypt on this issue significantly more emotional for the populace. For the country to see continued foreign investment and economic growth for the people there must be a political equilibrium within its borders and with its neighbours.

Nile Details/River Treaties

The Nile River along with the Amazon is the most recognizable waterway in the world yet the true source of the river is still unknown. The river has 2 main tributaries; the Blue Nile originating from Lake Tana, Ethiopia and the White Nile from Lake Victoria, Chad. These two converge at Khartoum, capital of Sudan to form the Nile proper. The Blue Nile accounts for nearly 85% of the river's water. In 1959, building on previous colonial treaties; it gave Egypt control over nearly 66% of the river flow along with a veto on any upstream projects. Ethiopia was never properly consulted nor was a signature on any of these agreements.

Project Details

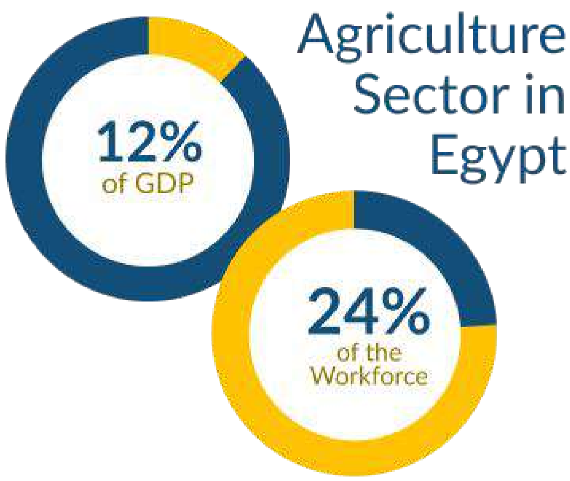
Construction broke ground in 2011 and just this year the dam began in 2020. The project was largely financed by the taxpayers, nearly $3B to avoid foreign investors being pressured by Egypt. Around $1.8B was financed by Chinese Banks. Upon completion, it will be the 7th largest hydroelectric power plant in the world; generating nearly 6.45 gigawatts of energy. The filling process is complicated with ongoing negotiations being broken, however, the expected timeline is between 5-15 years.

Impact on Ethiopia

This dam has the potential to power electricity for nearly 234M Ethiopians while only having a population of 109M. This surplus of energy will be a multiplier in their economy and generate gross revenues of $1B annually. Energy independence is a key strategic and economic goal of any country; Ethiopia will achieve this while being one of the cleanest in terms of generation. The energy budget of an average Ethiopian can and will significantly increase and ease theirtransition during the electrification of industrial processes. This is a landmark project for the country and its potential to improve the lives of the working class is the reason the people are very much invested. In the past, the country was largely ignored in treaties, despite contributing the majority of water to the river's flow; now the country has the chance to gain from their resources becoming the largest energy exporter on the continent. Economic history has always indicated that the capacity of energy products is directly correlated to the productive potential of the workers. With the potential of long-term economic prosperity, the likelihood of political violence will significantly decrease and therefore foreign investment will be much more secure, benefiting from positive feedback.

Impact on Egypt

The agriculture sector represents nearly 12% of GDP and 24% of the workforce in the Egyptian economy. The government exercises serious control from resource management to production. This only increases pressures as the outcomes of harvest are the direct responsibility of the government.



Current Negotiations/Model Treaty: Western Africa model

Sudan's historic role has always been a middleman in the process. The country has cultural and military ties to Egypt and is concerned about the downstream impact. However, in this case, the country may significantly gain from the construction. A cleaner and reliable energy source is a major goal for the nation. Other benefits included are prevention of flooding by controlling the flow of the Blue Nile; increasing the output of agriculture. Thus Egypt is very much politically isolated with only a small US presence backing Egypt. Current talks have resulted in little progress along with tensions being flamed. Ethiopia has installed Anti-Aircraft and SAM systems near the construction to counter this threat. The key negotiating goal will be to reach a compromising treaty on the planned filling of the dam with rules on prolonged droughts. Egypt is also expected to play a role in their water management by increasing efficiency in farming as well as growing less water-intensive crops. A model treaty already exists in West Africa surrounding the Senegal river, 4 countries that share the river have acknowledged the relied dependence and have planned projects accordingly to protect downstream nations. Perhaps the solution lies in Egypt realizing the geographic reality of the Nile, that the waterway is a shared resource and failure to cooperate will only be more devastating for the country.

Additional Geopolitical Similarities/ Environmental Impact

This situation is not unique in the world. With any platform of energy generation, there will be conflict on the resources necessary to produce it. Cobalt is a key mineral in almost every modern electronic device and disputes control 66% of the trade, the DRC has seen very little of the profits. In relationship to dams, currently, China is leveraging its economic and geopolitical power to control the flows of water from the Tibetian Plateau, affecting the agricultural output of India and Bangladesh. What is also ignored is the potential environmental impact not only to downstream agriculture but Carbon emissions. Yes, hydropower the clean sustainable resource is responsible for emitting nearly 1.3% of the world's greenhouse gases through rotting vegetation in the reservoir, for reference Aircraft are responsible for 4% of the world's emissions. The continued push for clean energy through political agendas often ignores larger economic and climate impacts in the fine prints. The reality is moving from fossil fuels will not remove the international pressure to secure resources but only shift the focus to others. The lesson to understand is stated best by Economist Thomas Sowell-

> **There are no solutions.
> There are only trade-offs.**
>
> **- Thomas Sowell**

Meaning with any approach to solving our problems with climate and economy, there is going to be consequences to any alternatives to the status quo. The key to achieving net-zero emissions while providing economic prosperity to the third world will be in balancing these expectations and cooperating on a shared vision.

Business Strategy:

BlackBerry Is Back And Here To Stay

Sanovar Singh Bajwa
Grace Fan

Illustrated By
Lynn Zhu

Introduction

BlackBerry is often remembered as one of the earliest brands whose smartphones gained mass acceptance among business professionals and everyday consumers. BlackBerry smartphones are considered one of the most influential consumer technology products of the mid-late 2000's and were highly popular among many. However, BlackBerry's complacency and conservatism allowed current industry leaders like Apple and Samsung to acquire large amounts of market share, which ultimately led to their demise. When BlackBerry experienced their drastic downfall shortly after 2010, many thought the company's best years were behind them. However, the company revitalized their business through leveraging their brand's security and engaging in corporate development initiatives. Their current focus on enterprise software, cybersecurity and embedded systems catered towards different industries has helped them emerge as a strong contender and future market leader in the growing B2B software market. Their recent partnerships with Amazon Web Services, expertise in cybersecurity and Internet of Things (IoT) infrastructure, and strong management team have made them a future ready business that will continue to experience strong growth in the many years to come.

History

BlackBerry unveiled the BlackBerry 5810 in 2002, which was their first model that could be called a phone and the company spent several years enhancing the product by gradually implementing features like a color display, WiFi, instant messaging, and web browsing into future products, which was a portfolio of features that very few competitors offered. BlackBerry phones had a simple design, were intuitive and were targeted towards business professionals. The phones provided a way to complete tasks they would normally need a computer for, such as responding to emails and texts and browsing the internet. However, the increased connectedness the BlackBerry Messenger (BBM) platform provided users was the most critical component that fueled BlackBerry's success. It was apparent that consumers desired instant connection to other users and the expertise BlackBerry gained through developing the Mobitex instant messaging network with Rogers gave them a competitive advantage in providing consumers with this feature.

Convenience

Interconnection

Security

BlackBerry's unique value proposition of enhanced security, convenience and interconnectedness at the time fueled their tremendous growth in the mid-late 2000's. At the time, BlackBerry dominated the smartphone market in the United States and had several contracts with governments and large corporations, which positioned them strongly for the next few years. Even after the release of Apple's revolutionary iPhone with a full touch screen display later that year, BlackBerry continued to grow tremendously and had 50% market share in the US smartphone market and 20% of global market share by 2010.

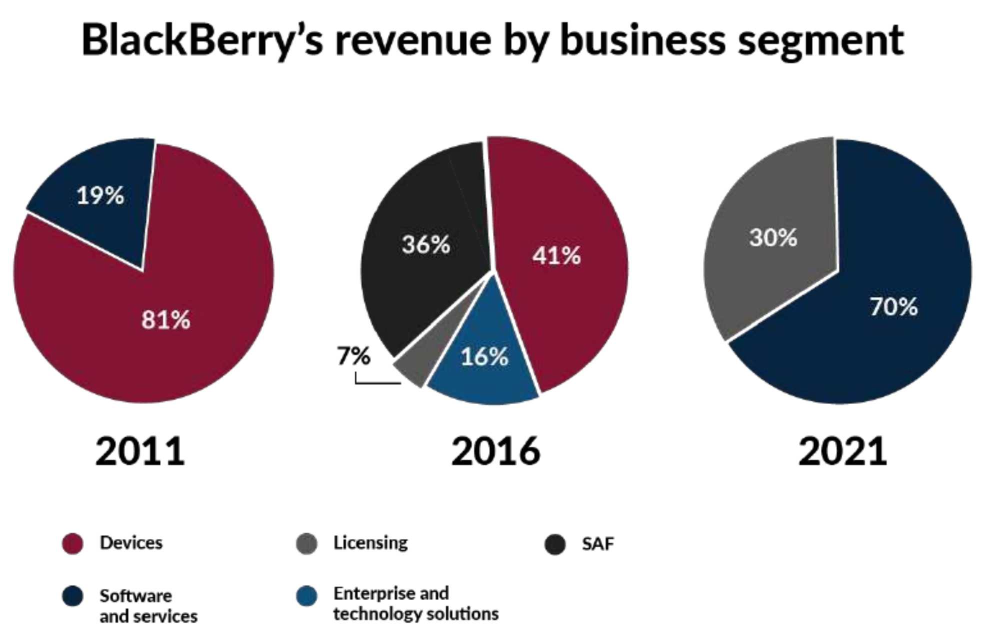
BlackBerry's exit from the smartphone market can be attributed to the company's complacency, however their lack of awareness within their primary operating market, software exclusivity and the absence of a software ecosystem were all significant factors that led to their downfall. Although BBM improved connectedness among business professionals, BlackBerry's decision to keep that software exclusive to their smartphones resulted in the company missing out on a significant growth opportunity. Consumer demand for cross-platform messaging applications did not waver, which led to the rapid growth of WhatsApp, a company that went on to be acquired by Facebook and grow into a $700 million business. In addition, BlackBerry restricted further development of their consumer software ecosystem due to the lack of a well-established app store, which limited any opportunity for software developers to help grow the platform. In contrast, Apple and Android's operating systems provided several opportunities for developers to create applications for a broader market through their respective app stores. As a result, their 20% 2011 US market share decreased to less than 5% in 2012 and 0% by 2017. Many of the company's top executives also departed and BlackBerry was forced to lay off a large portion of their workforce. By the end of 2011, BlackBerry's stock price on the Toronto Stock Exchange (TSX) had plummeted over 90% from an all time high of $241.90 in July of 2007 to $14.80, which was lower than its book value per share (BVPS), signifying the market's significant loss of confidence in the company. As a result, it was essential for BlackBerry to alter their business strategy.

Business Model Comparison

BlackBerry's business model and revenue streams have transformed considerably over the last 10 years with their shift away from the B2C smartphone market to the B2B enterprise software market. Management's decision to transition the company from primarily being a consumer facing (B2C) business to focusing more on business-to-business (B2B) transactions has been key in revitalizing BlackBerry.

BlackBerry's current business-to-business (B2B) strategy focuses on serving corporate customers and governments, which has allowed them to leverage long-term partnerships to build a stable, recurring revenue stream through a Software as a Service (SaaS) business model.

In addition, shifting to a B2B model also allowed the company to hedge against the risk of volatile consumer preferences. Since everyday consumers tend to be more spontaneous with their purchases, marketing departments for consumer facing businesses must incorporate an element of emotion to their promotional campaigns, which can be a considerable disadvantage for companies that emphasize functionality over aesthetics. Avery Hartmans, senior tech reporter for Business Insider, explains, "[BlackBerry's] company ethos was built around designing a great product that just worked and iterating on it very slowly. To that end, they would add small features over time, but they weren't shooting for big, sweeping changes that would shock and delight consumers." BlackBerry didn't have a significant enough focus on appealing to consumers and their



efforts towards pleasing corporate customers and governments led to their sharp decline in market share within the consumer smartphone market, where Apple was able to entice consumers through their constant innovation and developments. However, BlackBerry was able to recognize their strengths and further cater their products and services to corporate customers who require more rational promotion and have a larger focus on functionality over emotional appeal.

The B2B Software Market and Enterprise of Things niche has provided BlackBerry with the opportunity to expand its customer base to industries where secure communication holds primary importance, which signifies that they have strategically capitalized on their strength in cybersecurity to expand to additional markets. The B2B Software market has also enabled BlackBerry to not have to track competitors as often because of the industry's high barriers to entry. The company's market share and growth prospects truly highlight their success within these new industries. According to BlackBerry's 2017 Analyst Summit, there are an average of 10 million new "things" (devices, systems, etc.) that are added on a daily basis. Currently, BlackBerry has a 20% share of the enterprise mobility market along with a dominant 50% share in the automotive embedded software market. In 2016, there were 3.9 billion smartphones and 6.4 billion other connected systems and devices on a global scale. Through the year 2020, it is projected that there will be 6.1 billion smartphones and 20.8 billion other connected systems and devices. With this projected growth, the opportunity for future expansion is significant.

Business Strategy Transition

BlackBerry's transition from the B2C smartphone market to the B2B software market influenced several organizational and operational changes, which enabled the company's revitalization.

Through engaging in Mergers and Acquisitions (M&A) activity, BlackBerry was able to acquire two private businesses that have emerged as cornerstones in their current business model. BlackBerry began by acquiring QNX Software Systems in 2010 from Harman International for around $200 million. BlackBerry nurtured QNX after the acquisition and leveraged their expertise to enhance the system's safety, security, scalability, and reliability. BlackBerry was able to apply the strengths

of its brand and highlight the security element of QNX, but also recognized the system's versatility and scalability, which they have been able to apply to several industries, such as medical devices, aerospace and defence, industrial controls, and heavy machinery. QNX provides flexibility to Original Equipment Manufacturers (OEMS) and has relatively low hardware requirements, which has been a catalyst in helping the company acquire significant market share within the automobile infotainment systems market, which control the data, communication and entertainment components within a vehicle. BlackBerry's QNX software provides the operating system and middleware, with OEMs controlling the overall user interface and experience of the infotainment product.

Currently powering over 175 million vehicles on the road, QNX has become a vital component in automotive software, rail transport and commercial vehicles and is trusted heavily by OEMs and Tier 1 manufacturers.

The second major acquisition BlackBerry made was of Cylance in February 2019. Cylance was a privately-held cybersecurity company based out of California with a focus on artificial intelligence implementation within its security software products. With BlackBerry's goal of being the world's largest and most trusted AI-cybersecurity company, the Cylance acquisition provides immense value to the company's preexisting cybersecurity portfolio. Cylance provides an AI-driven security system that monitors the entire attack surface with automated threat prevention, detection and response capabilities to prevent any potential software breaches. Cylance's unique security capabilities combined with BlackBerry's development of the first AI-powered endpoint management system position them to be a cybersecurity and IoT leader in the future.

In addition to their corporate development initiatives, BlackBerry also refined their marketing and sales strategies in order to align with their revised value proposition, mission and long-term vision. Upon making the transition, BlackBerry's value proposition changed and they began to pitch themselves as "the most secure and comprehensive way to connect people, devices, processes and systems for the enterprise of things." Their mission became "to be the world's leading provider of end-to-end mobility solutions that are the most secure and trusted." Their operations and goals consolidated towards their vision of "securing a connected future you can trust," and BlackBerry began to focus their sales efforts towards corporate customers. Their big focus areas become enterprises, governments, healthcare and financial institutions, and BlackBerry transitions to working with industries where high levels of trust are required, with regard to mobile infrastructure. By doing so, BlackBerry was able to differentiate itself from technology giants like IBM and Microsoft. Under CEO John Chen, BlackBerry has focused on staying relevant in enterprise software, as security becomes increasingly more important in the workplace. In an emailed statement to the Financial Post, the company stated that BlackBerry is the "clear leader" in the security software market and "enterprises should think twice about relying on any solution built on the foundation of a consumer technology that lacks the proven security benefits that BlackBerry has always delivered."

Appointing John Chen to be the Chief Executive Officer (CEO) of BlackBerry in 2013 was another critical change that revitalized the company. As Executive Chairman and CEO, John Chen revamped the organizational team and directed the company towards its new business strategy. Prior to joining BlackBerry, Chen had a variety of experiences serving boards of large corporations like Walt Disney and Wells Fargo and working with the United States in their International Affairs department. He came to BlackBerry withproven leadership and turnaround experience spanning over 40 years in engineering, and his reputation extended beyond the technology industry. The company explained, “Prior to joining BlackBerry, John served as Chairman and CEO of Sybase Inc. where he re-invented the company and led it through 55 consecutive quarters of profitability, providing outstanding shareholder returns during his 15-year tenure.” BlackBerry has been very impressed by his initiatives and explained, “He led BlackBerry through a successful pivot from being a hardware icon to becoming a software leader.

> **“As the world becomes more and more connected, with every 'thing' having its own IP address, BlackBerry's role ensuring safety, security and data privacy will become much more important.”**
>
> **- John Chen (Executive Chairman and CEO of BlackBerry)**

Today the company is poised to leverage its brand strength and heritage in mobile security along with its enterprise cybersecurity and embedded software growth engines to accelerate into the Enterprise of Things, an emerging category with billions of connected devices and massive market potential.”

Future Outlook

Looking forward, BlackBerry’s future prospects are very promising. Their growth potential within the security software market, partnerships and strong management team make them a future ready business that is positioned to sustain strong growth. BlackBerry’s plans for the future are to focus on cybersecurity and increase their presence within the industry through continuing to develop and innovate their proprietary software and acquire private businesses that will enhance their cybersecurity capabilities. John Chen plans on establishing BlackBerry as a leader in secure mobile communications, crisis communications and embedded software, which are some of the fastest growing security software markets totaling $22 billion. Their corporate development team, which acquired QNX and Cylance, has also acquired Encription, which is a UK cybersecurity company that will be used to kickstart a new consultancy business called BlackBerry Professional Cybersecurity Services. By doing so, the company will further expand their portfolio of cybersecurity products and services and successfully work towards their long-term vision. Furthermore, they are continuing to completely disconnect from the smartphone market, which is highlighted by the sale of 90 of their patents to Huawei.

From a partnership perspective, BlackBerry recently announced that they are collaborating with Amazon Web Services to develop IVY, which will be their Intelligent Vehicle Platform and will allow automakers to consistently and securely read vehicle sensor data and create actionable insights, which will enhance driver and passenger experiences. Amazon explains that the goal of BlackBerry IVY is to “support more rapid development of new customer experiences and unlock new revenue streams and business models. It accomplishes this goal while reducing costs by moving processing to the edge and reducing raw data transmission. It also improves overall operations with enhanced data visibility and access.” BlackBerry IVY will also help the company build expertise within the data security field, as IVY addresses a crucial data access, collection, and management problem in the automotive industry. Since most modern cars and trucks are built by compiling several parts from different suppliers, each vehicle model requires a unique set of proprietary hardware and software components. Amazon explains, “These components, which include an increasing variety of vehicle sensors, produce data in unique and specialized formats. The highly specific skills required to interact with this data, as well as the challenges of accessing it from within contained vehicle subsystems, limit developers’ abilities to innovate quickly and bring new solutions to market.” In addition, BlackBerry has also partnered with Baidu to work on autonomous driving technology and they are working with Zoom to implement their video conferencing platform into BlackBerry Dynamics secure mobility platform. These partnerships will also help BlackBerry build expertise within a specific industry and allow the company to increase their market share and dominance within the automotive sector.

In conclusion, BlackBerry’s ability to remain resilient and alter their business strategy has highlighted their commitment to adapt and innovate to meet market demands. Through leveraging corporate development initiatives and modifying their marketing and sales strategies, management has revitalized the company. In addition, BlackBerry’s stellar management team, strong partnerships and enterprise and embedded software expertise truly highlight that the company is back and here to stay.

Waterloo Business Review aims to use the Alumni Insights initiative to gauge experiences and takeaways from past students and curate them into unique articles, ultimately supporting our mission to

Educate, Engage, & Empower.

Alumni Insights

waterloo business review

A School of Accounting and Finance Student-Run Initiative

Alumni Insights

Curiosity And Exploration

An Interview With Alumnus; Akash Kapoor

Illustrated By:
Zia Baig

INTERVIEW: Akash Kapoor, Kellogg School of Management

Waterloo Business Review had the privilege of sitting down with alumnus Akash Kapoor over the winter to speak to him about his experiences, as well as his time at the School of Accounting and Finance (SAF). Akash graduated from the Master of Accounting (MAcc) program in Spring 2014 and is currently a Master of Business Administration (MBA) Candidate at the Kellogg School of Management. He has previously worked in roles across Product Management, Strategy and Analytics, most recently completing a Growth Product Management internship in Chicago.

Coming into his undergraduate studies, Akash had a strong interest in both technology and programming, but wanted to gain more exposure to the business side of things. Akash immersed himself in the broader SAF community upon entering the University of Waterloo, through participating in campus clubs and organizations. Doing so, and in addition to gaining a strong understanding of core business drivers through the nuances of accounting, Akash remained committed and very involved with the SAF and broader UW community through hackathons and clubs including Capital Markets Club (now UWFA). For his first work term, Akash completed a financial reporting role at Barrick Gold, a work term he enjoyed that also encouraged him to try something different afterward.

For Akash, his second co-op was a pivotal point in his learning, growth and development. Akash completed his second co-op term in PwC’s Corporate Tax group, where he was able to further explore his curiosity and passion for technology. Through his inquisitive nature and aptitude for technology, Akash was able to improve some of the firm’s processes. While completing his tasks, Akash realized several of his and his team’s tasks could be automated. He then went about designing an automation tool for tax file entries. This experience and triumph helped win Akash the co-op student of the year award while at PwC, allowing him to gain early exposure to the new and evolving Digital Transformation team, which he was working with on this project. As a result, Akash was able to ideate with the firm's senior management. When he returned to the firm for his next work term in Assurance, he was actively looking for problems he could solve. This time, he designed an excel plugin to help automate several repetitive and inefficient audit related processes which led to him winning the co-op student of the year award when he returned to school for a second time. After graduating and joining PwC's Digital Transformation team, he worked on a risk analytics platform called Halo, which is a program that harnesses a vast amount of data to analyze and visualize an entity's key metrics. After the Halo project was finished, Akash moved into the Data Analytics group alongside another Partner.

When he joined the Data Analytics group, he saw that there wasn't much structure to his role - largely due to the nature of the role being brand new. For Akash, this setting was perfect, as it allowed for creativity, abstract thinking and problem driven exploration. While he found data analytics quite interesting, he knew he wanted to be in more of a strategic role and started looking for opportunities within consulting. Before long, Akash saw an opportunity open up at Strategy& (a consulting firm owned by PwC). By leveraging his data and analytics skill set, he managed to land a role as a Consultant. Akash looked favorably upon his time at Strategy&, which allowed him to gain exposure to a wide variety of problems. He learned about the types of problems that would keep CEOs awake and learned more about the importance of building empathy. To better develop this skill set and add value through the process, there are a few questions one must ask themselves:

1. **How do clients think?**
2. **What are the clients' expectations?**
3. **Am I listening enough or am I doing too much talking?**
4. **Where do I add value in this entire process?**

In Akash's case, he discovered that he could add value to clients and the firm through his knack for process improvement. As a result, he soon began a new project for internal use at Strategy&, which would help the firm target and determine types of companies, as well as specific companies that may be struggling and in need of Strategy&'s services. He designed a benchmarking tool which would analyse the financial statistics of several companies and compare them to industry averages. This way, Strategy& could more efficiently determine which companies could become potential clients.

At this point, continuing with his constant drive to explore technology and expand his problem-solving capabilities, Akash began his tech-focused MBA at the Kellogg School of Management at Northwestern University. There are two main reasons why Akash chose to pursue his MBA at Kellogg: gaining exposure to the US market and learning about the qualities that make leaders successful. In particular, he assigns great importance to the latter, emphasizing how “magnetic leaders all have something in common”. In his case, having known early on that he wanted to be a people leader, Akash wanted to use his MBA education to validate the positive traits he already had, figure out which characteristics to potentially change, and build new habits. Having worked with senior executives at Strategy&, he recognized that the best executives are focused on influencing the values that their companies are built on and are able to motivate employees to be the best they can be at their jobs, thereby maximizing their positive impact on the firm. The strong faculty at Kellogg, composed of several former Fortune 500 senior executives, has allowed Akash to gain exposure to several of these charismatic leaders and learn from them, which has helped him develop as a people leader.

Continuing with the theme of his academic journey, Akash summarized several factors that helped him be so academically successful, especially during his time at the University of Waterloo. The key takeaway is to be continuously prepared, through reading assigned materials and actively participating. By having prepared beforehand, one can go into their lectures having already seen most of the content - this allows them to be able to ask questions that deepen understanding of a concept, as opposed to struggling to understand it in the first place. This theme of preparation was especially important for Akash during his MAcc year, when case-based academics became very prominent. When someone who wasn’t as prepared practiced case questions, they’d essentially be figuring out which concepts they didn’t understand. On the other hand, when Akash practiced case questions, he would be figuring out which concepts he could articulate better, since he already knew the content. As such, by being ahead of the pack and having the time to fine tune, Akash was able to be extremely successful in his academics. Now parting his wisdom to current students, Akash’s key suggestions are to maximize preparation and to ensure discipline.

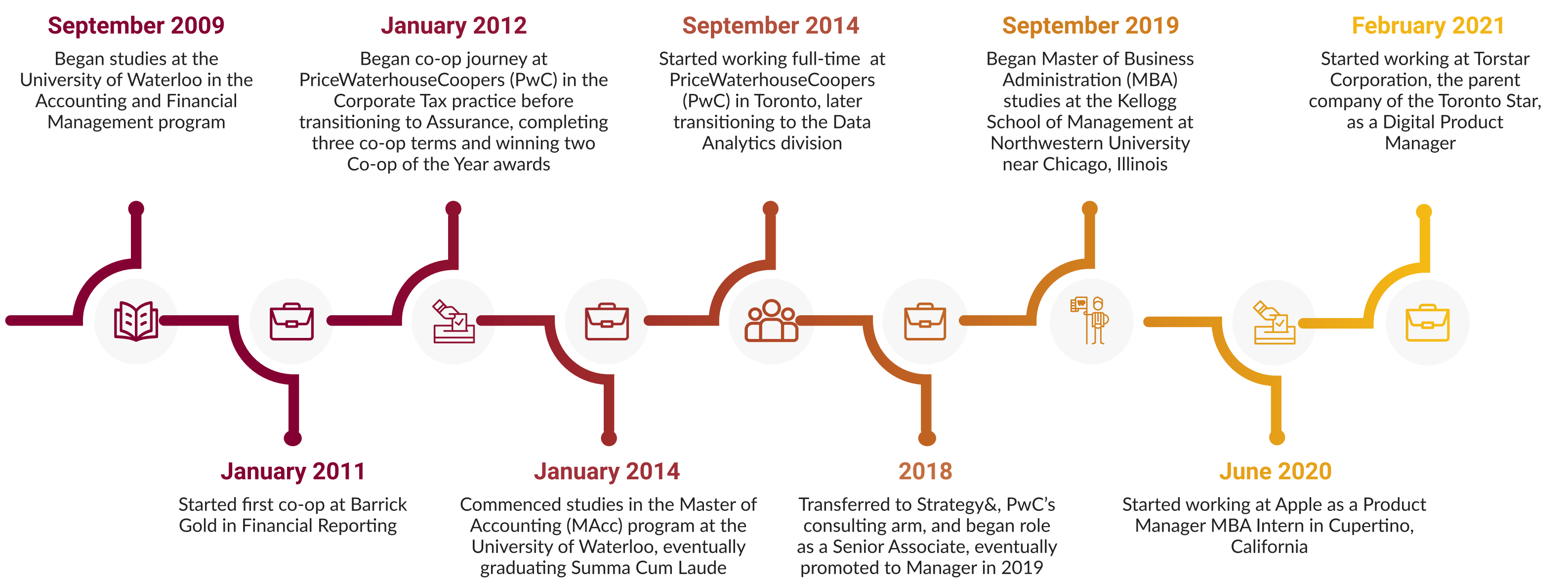
Early on, demonstrated by his performance on the Uniform Common Examination (now the CFE), where Akash placed first nationally amongst thousands of aspirant Chartered Professional Accountants (CPA), Akash was very passionate about the intersection between technology and accounting. When now asked about how he feels technology is going to impact the profession and role of accounting, he explained how the role of accountants is evolving, slowly becoming more strategic in nature. With more tedious tasks being automated through Robotic Process Automation (RPA) and Artificial Intelligence, the onus to interpret and communicate this data will, in the foreseeable future, fall upon accountants.

Akash emphasizes the importance of constant curiosity and reflection. Akash's impressive and award-winning talent for process improvement and automation boils down to his ability to reflect on how he performed a task in the past, and why he performed it that way - from there, it becomes possible to find the pain points in a process, and figure out how to mitigate them. Once an improvement is in mind, it is important to actually bring the idea up to management and stakeholders. Oftentimes, young professionals feel intimidated to talk to management about ideas they may have to improve certain work processes. However, one way Akash put his advice was; "Don't be afraid to challenge the status quo, leaders at these firms are phenomenal, and are always excited to put forward individuals who are passionate about change." He believes it is very important to have a continuous sense of curiosity, as it causes one to continuously find problems to solve even in the absence of direct instructions. In fact, Akash's knack for being able to proactively find problems to solve is essentially what allowed him to move into data analytics from an accounting background, followed by a move into strategy consulting. Through his experience in consulting, Akash's approach to problem-solving matured considerably. While he was in the early stages of his career, he would often be working in unstructured situations, such as at PwC's Data Analytics division; however, he has developed a framework for problem-solving over the past few years:

1. **Identify the objectives you need to meet**
2. **Identify the audience and stakeholders - a great solution doesn't mean much if it isn't geared towards the appropriate stakeholders**

3. **Start to "peel back the onion" to identify the root problem, instead of going for superficial band-aid fixes**
4. **Communicate findings and the solution in a simple manner - you don't need the most complex solution, you just need a common sense solution**
5. **Reflect on this entire process to continuously improve your own problem-solving skills**

Akash notes that the best problem solvers ask the best questions and wire themselves to be very receptive to feedback. The key is to be able to continuously hone one's skills and become an excellent executor - "You want to be counted on to deliver excellent results." Pursuing a wide range of activities has led to Akash developing a broad understanding of the business world, and he believes it is crucial to be testing one's limits - his advice to students is to keep an open mind, and try to gain a breadth of experience. As a leader in PwC's Risk Assurance practice once told Akash, the more you step out of your comfort zone, the more your comfort zone expands. He suggests that if one finds something interesting, it is best to go for it. In his own case, his curiosity often drove his professional development - he noted that as a very outcome-driven person, he picked up his programming skills mainly through finding a problem he wanted to solve and learning the skills on the way, as opposed to learning from long coding courses. Finally, he recommends that all students enjoy their undergraduate years to their fullest, since in his opinion, the undergraduate years are some of the most fun-filled years of anyone's life.



WATERLOO BUSINESS REVIEW

Alumni Insights

The Balance Of Risk

An Interview With Alumnus; Cindy You

Illustrated By:
Zia Baig

INTERVIEW: Cindy You, London Business School

Waterloo Business Review had the privilege of sitting down with alumnus Cindy You over the winter to speak to her about her experiences, as well as her time at the School of Accounting and Finance (SAF). Cindy graduated from the Mathematics and Chartered Professional Accountancy (Math/CPA) program in Fall 2015 and is currently a Masters of Business Administration (MBA) candidate at London Business School. She previously worked as a Consultant at Boston Consulting Group (BCG) in their Toronto office upon graduating from the University of Waterloo.

Early on, Cindy knew she wanted to anchor in something technical that was also related to business, which ultimately led her to the Math/CPA program where she focused on pursuing her CPA designation and becoming an auditor. Math was a discipline she enjoyed and wanted to specialize in. She was able to extract valuable skill sets such as logical processing and obtain a stronger understanding of financial statements, which she believed to be a great foundation to open a wide array of opportunities and doors across different industries, sectors and disciplines. She noted that as she better understood the role of audit and the CPA designation, she began to ponder her career goals and found her curiosity to lie in the decision-making process and creation of forward-looking strategies for businesses.

After working in audit at KPMG, she grew inquisitive of the thought process and work behind the decisions her clients made. Cindy wanted to be more involved in the approach behind both business decisions and transactions, further developing an interest in business strategy. Embarking on one of the first risks she would begin to take in her young, professional career, something Cindy noticed was that a lot of times, students and young professionals forget that their careers are marathons and not sprints. She explained, "I would really encourage students to stretch beyond SAF resources, this really allowed me to open my perspectives on different issues which resonated with me." With this, students don't always go out and seek to explore their interests fearing that very risk of failure and of the unknown, something which drives her and continues to fuel her decisions supported by passion and interest.

Cindy recounted a key moment that sparked her interest in understanding the internal drivers behind business decisions. While completing an annual variance analysis for a client, she inquired about the year-over-year changes in marketing expenditure, which led to intriguing stories and perspectives told by the client's accounting manager, as to how new products were launched at the company and how marketing campaign initiatives were started. These stories drove her curiosity further as she gained deeper insight into the industry through conversations with upper-year students at school. Early on, this launched her passion for consulting. Cindy went on to say, "I really wanted to be involved in the decision of creation and consulting allowed me to do that." Having gone through the recruitment cycle for consulting, Cindy advises students to look at case resources as a way of familiarizing themselves with the format for what firms are looking for. In regards to case interviews, Cindy explained "It is not a measure of anyone's intelligence, it is more about 'can you demonstrate the skill sets that consulting requires'." Cindy concisely summarized three key steps for case preparation:

First, understanding what a case is about.

This becomes crucial as case interviews are inherently different from case competitions, where the level of ambiguity is comparatively low. She suggests picking up a few case books from MBA schools to get a better sense of the types of cases being assessed: market entry, profitability, operational, etc.

Second, testing it out with peers.

Practicing live case interviews is significantly different from passively reading them via case resources. This is the stage to make mistakes and work through problems to become comfortable.

Third, learn from the experienced.

Cindy emphasized the benefit of practicing mock interviews with industry professionals. They are the ones who have experienced the process and are able to provide students with genuine feedback along with their vast industry knowledge, which could help broaden perspectives as a student and add an element of credibility to solutions.

After providing clear steps for students to hone their case interview preparation, Cindy also highlighted the importance of fit, which ultimately becomes a key determinant in a candidate's success upon passing the case interview threshold.

She highlights the skills and approach from a case interview to be a good simulation of what candidates should be prepared to execute on a daily basis in consulting. That being said, it is one thing to understand the framework and approach to both problems and cases, while it is another to carry out projects that require different levels of knowledge and skill sets on a day-to-day basis.

At BCG and in consulting, no day is the same as another - with the same concept applying and holding true from project to project, or engagement to engagement. “Consulting is like a box of chocolate, you never know what you are going to get and there is never a typical day.” For Cindy, one thing she wishes she knew before launching her career was how much control she would have over projects and the influence she could have through her work. She mentioned, “It's important to be an advocate for yourself.” Find opportunities to learn about your interests and let that drive your work. For Cindy, her passion for climate change and sustainability is something she found joy in and further explored through her work at BCG. Specifically, the firm's Center for Climate & Sustainability was one department Cindy found an interest and significant importance in, allowing her to explore and better understand how she in her career can support clients and businesses to help transform commitments into action for a more sustainable world. Tying in values, goals and ethics she personally resonates with and finds interest in.

In her experience at BCG, Cindy valued and appreciated the tools and resources made available to learn. For Cindy, she credits the learning process at BCG to the people, who often were able to support and drive enriched conversations. In her experience, the firm did an incredible job to help professionals familiarize themselves with concepts for engagements - making additional resources, people and professionals available who could provide their own insight, experience and expertise. As such, on one project, Cindy was able to learn about the carbon offset process, which allowed her to get well acquainted with learnings for a project - as well as become more knowledgeable about an area of her interest; climate change and sustainability.

For students and professionals who like Cindy, are eager and passionate to implement varying elements of social impact into their work and more broadly their careers, Cindy has two pieces of advice:

First, find ways to create and deliver impact in everyday tasks.

On a day-to-day level, anyone can do the small or individualistic things to create and support impact to whatever it is, one seeks to. It is important to drive and embark change on a day-to-day basis.

Next, create and establish a framework to take on roles that can enable you to become actively involved at the higher level for social impact initiatives.

As a professional, especially in consulting, the work is out there - waiting to be tackled to curate impact.

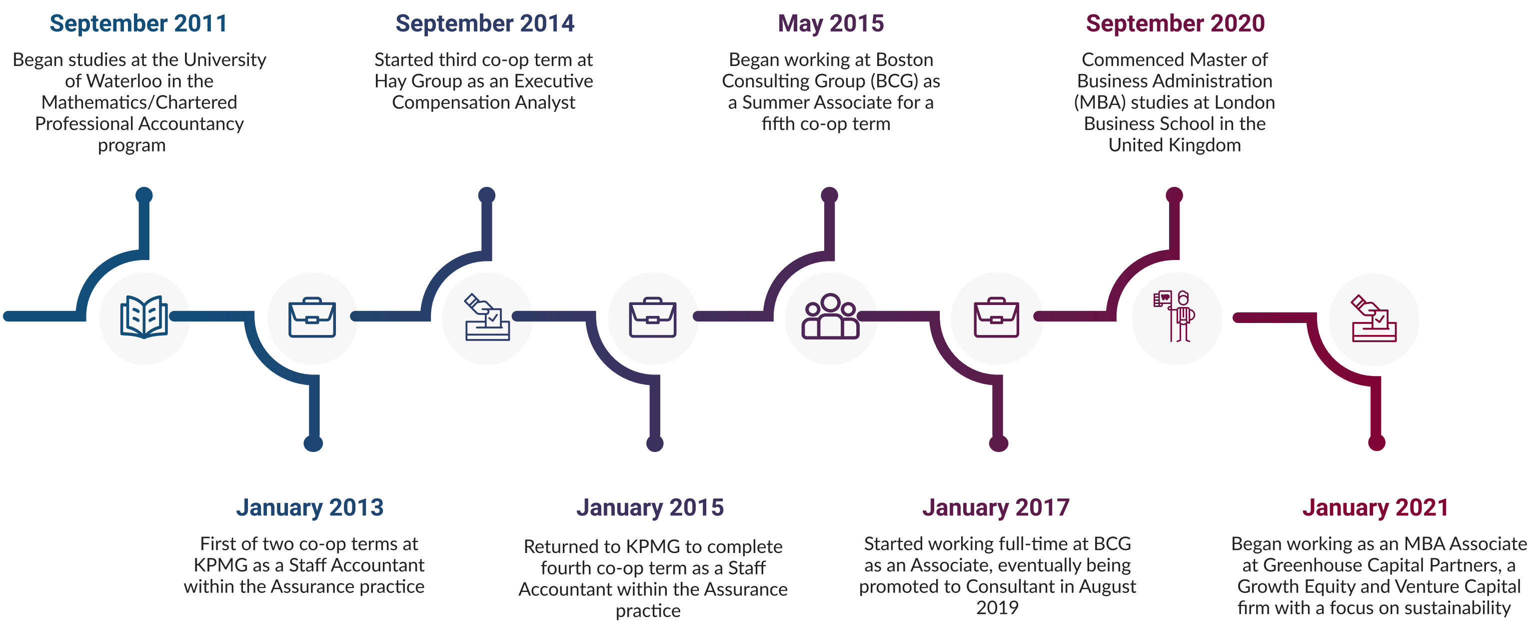
In driving social impact and choosing between different organizations, Cindy succinctly outlines two areas of considerations for students. First, consider what type of organization you want to work for. For Cindy, she wanted to work for a company that is for-profit because of the flexibility and choice regarding social impact projects. Second, at what point do you want to enter the organization? If one chooses to enter the organization upon graduation, this would mean building up credibility from the ground up and growing within the organization.

One may also choose to build up a skillset outside of the company and enter the organization at a managerial level. The ultimate lesson from asking and considering these questions is that different career trajectories can lead students to different experiences, ways to create impact on varying levels and different growth opportunities.

For Cindy, risk and continuous growth for opportunity is paramount - evident in her choice to pursue her MBA at London Business School. In her decision to opt for an MBA, she's forgoing a promotion and growth at BCG. For her right now, it doesn't entirely make sense - but more importantly, it doesn't need to, at least not right now. The risk in pursuing her MBA may overshadow the opportunities and learnings higher education provides. For Cindy, business school is a form of a reset and break that also allows her to explore areas of her interest in a world-class city, while also allowing her to expand her network. In the long run, it allows her to build a global network and gain more perspective and insight into working with different people and different cultures. At business school, Cindy has gotten the chance to further explore her interest in climate change through a new discipline: venture capital.

In her role as an MBA associate, she's able to use her experience and expertise to grow capital investments in technologies and solutions, promoting health and sustainability in food, agriculture and the environment. This has allowed her to work for a cause she's passionate about, in a capacity that's new, but complementary to the experience and skills she can bring to the table and enhance through her role.

At London Business School, Cindy ultimately hopes to take away a personally fulfilling and rich experience that allows her to grow in experience and passion - equipping her with the tools and framework to further explore topics important to her in new roles and capacities. Knowing what she knows now, and reflecting on her time at the University of Waterloo and in her career so far, Cindy emphasizes the importance of risk. “Taking risks has allowed me to explore areas that I did not know existed when I was an undergrad”. As a student who may be early in their undergraduate career, there shouldn't be a great inclination to be averse to risk. In the long run, 4-month work terms don't necessarily dictate the careers students go on to have. We also cannot forget our journey and the bigger picture. Careers are marathons, students shouldn't get caught up in 4-month sprints when considering the whole marathon is upwards of 40 years. To students and young professionals alike, Cindy reminds them “Don't be afraid to take a risk, you are so young. Ask questions, be curious and test things out. If it ends up failing or it doesn't work out, it's not going to have an impact on you in the long run... Things will work out.”



Alumni Insights

Striving For Excellence

An Interview With Alumnus; Joanne Gutwinski

Illustrated By:
Zia Baig

INTERVIEW: Joanne Gutwinski, Harvard Business School

Waterloo Business Review had the privilege of sitting down with alumnus Joanne Gutwinski in the winter to learn about her experiences in private equity, investment banking, as well as her time at the School of Accounting and Finance (SAF). Joanne graduated from the Mathematics and Chartered Professional Accountancy (Math/CPA) program in fall 2013 and the Master of Accounting (MAcc) program in 2014. She currently works in private equity in New York at The Blackstone Group. She previously worked as an Investment Banking Analyst at J.P. Morgan in their New York office upon graduating from the University of Waterloo and is currently pursuing a Master of Business Administration (MBA) at Harvard Business School.

Joanne came into the Math/CPA program with the intent of pursuing the CPA designation and began her career with Deloitte within their tax practice, while also spending co-op terms in audit. She initially wanted to pursue a career where she would have strong job security and a designation to fall back on. However, she realized that accounting was backward-looking where, "something has happened and you are recording or double checking the recording of that event." The backward-looking nature of audit and tax did not appeal to Joanne, as she wanted to pursue a forward-looking career, where she could influence the future decisions of a company and better understand how businesses work. So after spending all of her co-op terms at Deloitte within different groups in their audit and tax service lines, Joanne discovered investment banking and decided to pivot towards a career in finance. Although Joanne didn't return to Deloitte full-time to pursue a traditional accounting career like many of her peers, she strongly believes that her experiences at Deloitte contributed greatly to the work she does now, as it requires a strong understanding of financial statements, which is a skill that she developed through her experiences in accounting. She explained, "I think accounting is super helpful and it's incredibly useful for my job all the time." Overall, Joanne really enjoyed her time at Deloitte and believes that her learnings from the firm have enhanced her skillset. The MAcc program was a great transitionary period that allowed Joanne to apply her technical knowledge from her 4 years of undergraduate studies to real-life scenarios in a collaborative setting.

During her time in the MAcc program, Joanne dedicated a significant amount of her time towards competing in case competitions and attending conferences. A noteworthy competition she competed in was the National Investment Banking Competition (NIBC), where she was able to network with several representatives from different firms. Joanne mentioned that she was very fortunate, as she was able to stay in touch with a recruiter from J.P. Morgan, who kept her updated about job openings within their investment banking division, which contributed greatly to her receiving a full-time offer there. Joanne found competitions incredibly useful because they provided her with an opportunity to network organically and showcase her diverse skill set. She elaborated, “These competitions are a lot of work. For NIBC, we were pulling all nighters, it was super late and it takes a lot of work to qualify, but then you get to amortize that work over hundreds of interactions that you then don’t have to prepare for because recruiters know that you are technical, competent, a good presenter, and can work well in teams. From a recruiting standpoint it’s an excellent way for you to get in front of as many people as possible and from a personal and professional development perspective, you learn a lot.” In terms of her career path, Joanne explained, “if I didn’t go to NIBC, I wouldn’t have met that recruiter from J.P. Morgan and my career trajectory could have entirely changed.”

At J.P. Morgan’s New York office, Joanne worked within the Corporate Finance Advisory group, which was a product group that focused on spin offs, split offs and inversions for clients within a wide array of industries. She believes, “investment banking is probably one of the best training grounds for developing technical skills, pushing yourself and really learning your limits in a relatively safe way.” She further elaborated and mentioned that investment banks are very good at training and helping their analysts navigate learning curves. She also found that having a good attitude and being a hard worker made people want to train her more and she attributes success to constantly having a positive outlook and strong interpersonal skills. Despite enjoying the work and connecting with her colleagues at J.P. Morgan, she felt that she was still on the sidelines and wanted to be more involved in decision-making, which ultimately led her to her current role at Blackstone, where she is now actively involved in the investment process. The skillset Joanne developed at J.P. Morgan translated really well to her work at Blackstone. She explained, “by working very long hours, you compress almost 5 years of experience into 2 and that practice significantly enhances your soft and technical skills."

In her current role at Blackstone, Joanne works in the firm's private equity division and is involved in investing in businesses across several industries, which aligns closely with her interests, as she is industry agnostic. From an operations standpoint, Joanne described that private equity firms are like quarterbacks in the National Football League (NFL), where they are responsible for orchestrating several specialists that focus on different facets of the portfolio company. She has been mainly involved in investing activities at Blackstone, but also had the opportunity to complete a secondment where she got to work with the management team of a portfolio company with their business strategy. In addition to her secondment, Blackstone also provided her with the opportunity to shadow a C-suite executive at one of their portfolio companies and Joanne was able to gain exposure to the day-to-day operations at that company.

Joanne explained her decision to pursue a Master of Business Administration (MBA) was a very difficult one, as she was really enjoying her job, loved her team and liked being in New York.

Although pursuing an MBA did not make sense financially, Joanne recognized that there were several qualitative aspects of the MBA that could not be measured quantitatively. She explained, "I ended up going to do the MBA because I started to realize that no NPV analysis of the MBA was ever going to make sense, but that there was a lot of qualitative stuff that was really hard to value, but very easy to undervalue because you cannot value it clearly." In addition, the MBA provided an opportunity for Joanne to expand her network outside of finance and meet people from different disciplines and walks of life. She also mentioned, "I realized that my job now is very different from what my job will be 10 years from now. Waterloo prepared me incredibly well for my job now, but 10 years from now when my job is to source deals, negotiate deals and know people to make things happen, I will be totally unprepared for that." So, she decided to pursue the MBA and go to a school that would focus on that element of her career. Most of Joanne's current courses at Harvard Business School are around negotiation, which aligns very closely with her professional development goals going forward. In these classes, she has had notable individuals provide their teachings. One such example is the Chief Operating Officer (COO) of the New

England Patriots, who explained how he negotiated with Tom Brady to reach a new contract with the team. With regard to student leadership and extracurricular involvement, Joanne was very involved within the School of Accounting and Finance. She was a part of the University of Waterloo Accounting Conference (UWAC) and several other organizations where she was able to connect with like-minded students with similar interests. She encourages students to be involved and take initiative because, "employers are going to be looking for a demonstrated history of excellence, leadership and interest in things outside of the classroom." She further explained, "By finding an appropriate club [or organization] and taking on a leadership role, you are basically showing future employers that you are willing and able to go above and beyond what you absolutely have to do in order to get the job done and you have a diverse skill set. Student leadership also helps if you choose to apply to an MBA because business schools want to see that candidates are involved leaders within their schools and communities." The SAF Student Investment Fund in particular, played a large role in her development, as it applied the theoretical concepts from her courses to a setting outside of class. She had the opportunity to build upon her technical skills and also develop her own views on the market through determining the value of different equities and comparing that to their current share prices. In addition, the Student Investment Fund also helped Joanne discover her passion for finance, which has guided her career after graduation.

Looking back at her diverse experiences and career to date, Joanne's advice for current students is to strive for excellence in everything that they do, regardless of whether they plan to pursue those opportunities long-term. She elaborated, "I pursued a Math degree and I knew that I wasn't going to be a mathematician, as that was never my goal, but I still had to strive to be the best that I could be and put everything I had into my studies because it served me well. Through my experiences in undergrad, my degree taught me how to be a good learner. Tracing that forward, there will be times where you will be in a job or situation and know it isn't what you want to do long-term, but really being grateful for the opportunity you are given and translating that gratefulness into putting everything you have into your work will really serve you well because it will create a track record of excellence, which will help you transition into the next chapter of your career."

September 2009

Began studies at the University of Waterloo in the Mathematics/Chartered Professional Accountancy program

September 2013

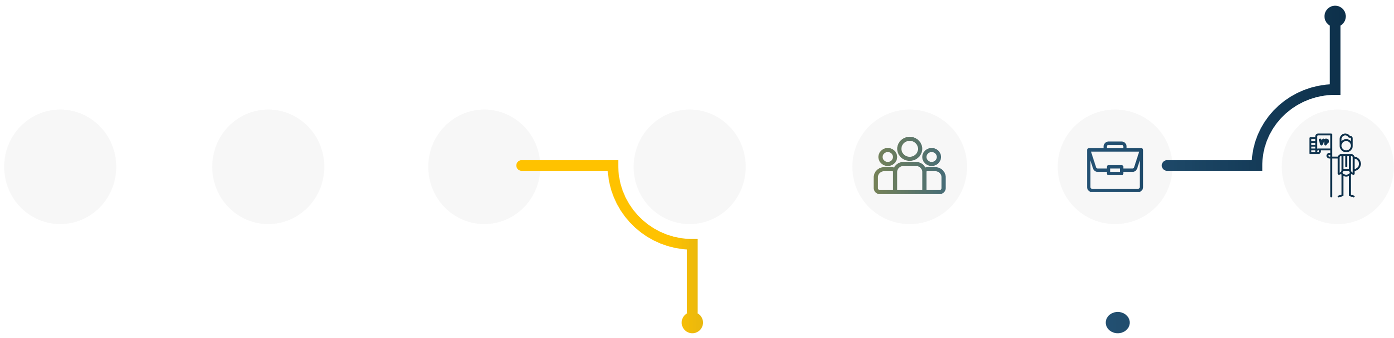
Joined the School of Accounting and Finance Student-Run Investment Fund as a Junior Portfolio Manager

August 2014

Started full-time as an Investment Banking Analyst at J.P. Morgan in their New York office

September 2019

Began Master of Business Administration (MBA) studies at Harvard Business School



January 2011

First of four work terms at Deloitte as a Staff Accountant within the Tax practice and later the Assurance practice

January 2014

Began studies in the Master of Accounting (MAcc) program at the University of Waterloo

August 2017

Joined the Private Equity division at The Blackstone Group in New York

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