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Ivey Business Review is an undergraduate business strategy publication conceived, designed, and managed exclusively by students at Ivey Business School. Its mission is to provide a forum for tomorrow’s business leaders to develop, voice, and discuss their thoughts on today’s business strategies, threats, and opportunities. Articles are written by undergraduate students in the Ivey HBA program, and have been created specifically for the publication after several months of intense collaboration between student writers and members of the Editorial Board. Additionally, the publication’s blog platform allows students and young alumni to further the IBR mission year-round.
Note from the Editorial Board:

“Reinvention from Within”

As the largest technology venture capital fund in history, Softbank’s Vision Fund was pitched as a dream to revolutionize the future through accelerating technological advances. Its goal to pave a path to the information revolution was backed by an astonishing $100 billion. Despite its lofty ambitions, the Vision Fund was not alone when it came crashing down in 2019 after portfolio companies failed to generate sufficient returns.

Compared to the powerful legacies of past technology companies, more than half of 2019’s IPOs were trading below their offer prices at year-end. From Peloton to Lyft, even innovative tech unicorns struggled to reach the pre-IPO trajectory they had envisioned. With the benefit of hindsight, a clear message emerges from these shortcomings: no one is invincible.

As we constantly hover on the brink of change, it is ever so important for businesses to reinvent themselves; to proactively create new ways of staying ahead before they hit freefall. Throughout the month of February, our team has examined 11 opportunities for businesses and governments to reinvent themselves in the face of an uncertain future, culminating in the Spring 2020 edition of the Ivey Business Review.

With Molson Coors facing declining revenues in a shrinking traditional beer market, we recommend it creates an incubator to capitalize on innovative new craft beers. As shifting consumer preferences create new market opportunities for simulated meats, we recommend that Tyson Foods launches a vegan product in Southeast Asia. We demonstrate how the Argentinian government can collaborate with distressed hedge funds to ease its debt crisis. Our feature on the English Premier League illustrates how the world’s largest soccer league can capitalize on its global fan base through a partnership with fast fashion retailer, Uniqlo.

Our articles on Haas F1, Lyft, Boston Dynamics, and Impinj present new opportunities that leverage existing competitive advantages to create possibilities for reinvention from within. We also propose bold new strategies for Vermilion Energy and Under Armour to create value for their shareholders. Finally, our recommendation to reform the American insurance industry reinforces the idea that reinvention can go beyond the corporate sphere.

On behalf of the Editorial Board, we hope that this edition will provoke you to think about the unique challenges and opportunities that businesses face. By emphasizing the importance of reinvention from within, the Ivey Business Review seeks to propose solutions that apply in both the world of today and the world of tomorrow.

Sincerely,

Gary Wu & Rahul Guggali

Editor-in-Chief & Publisher
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Interview: Kevin O’Leary
Chairman, O’Leary Financial Group
IBR: What inspired you to become an entrepreneur?

I’ve talked to lots of entrepreneurs about this. There’s always some seminal event that occurs in their lives, usually early on that pushes them towards starting their own business. For me, I was living in Ottawa attending Nepean High School and I had a job in the afternoons at the Lincoln Fields Mall in an ice cream store called Magoo’s. I had only worked there for three days or so, and I was a scooper. While people are choosing their flavor, the scooper generally gives them a sampler stick with the ice cream on it. Often, they take the gum out of their mouth and throw it on the floor. The parlor had Mexican tile. And so, the owner, on the third day, said to me, “Look, before you leave, scrape all the gum off the tile.” And I said, “Wait a second.” I was very concerned because the only reason that I took the job was that I was interested in this girl in my class who was working in the shoe store right across from Magoo’s. She was watching me, and I did not want her to see me on my knees scraping gum off the floor. So, I said to the owner, “Look, you hired me as a scooper not a scraper.” And she said, “How about this? You’re fired.” I said, “What do you mean fired?” She said, “You’re fired—I own the store and you will do what I tell you to do.” I said, “Well, I mean, if you told me I had to scrape gum off the floor, I would not have taken the job.” She said, “Look, get on your bike and get out of here.” So, I went back home and told my mother what happened, and it was very traumatic because I had never really had a job before, and here I was getting fired within the first few days of starting. It was my seminal moment. I realized then and there that in life there are people who own the store and people who scrape the gum off the floor, and you have to decide which one you want to be. And I’m not saying being an employee is a bad thing; I’m just saying I’m not built for it. I wanted to control my own destiny and I did not want someone telling what I could and could not do. That was the last time I ever had a job and I’m very, very happy for the outcome. I went back years later to try and find her to thank her for the vector she put into my life. However, the store was gone, and nobody knew where she was.

IBR: Throughout your path of entrepreneurship, could you tell us about some of the crucial learning points from when you graduated, to starting Softkey and how you decided it was the right time for you to sell your ownership?

I went to Ivey, obviously, where you are, because after graduating from Waterloo, where I took psychology and environmental studies, my dad said to me, “You’re going to starve to death. These degrees do not lead to employment.” Because at the time in 1977, environmental concerns were not as powerful as they are today. Professors Sally Learner and Greg Michelangelo are now very famous in environmental studies. They were the team that started that faculty at Waterloo, and I was one of the first graduates. But I could not get a job anywhere. So, my father said to me, “You should go get your MBA and apply to Ivey and see if they’ll take you in. And I was lucky—I got in and I did my MBA there. When I received the acceptance letter, I called the Dean and asked him if I could document my two-year MBA experience in a film. I argued that the film could be a fantastic recruiting vehicle. The only problem was I didn’t have the budget to produce it. Bud Johnson, the Dean at the time liked the idea and funded the project. It went on to do very well for the school and we followed up with a second production five years later to track the outcomes of the graduates. By then they were working all around the world in some very interesting careers. They really speak to the global brand the Ivey Business School had built, even back then, and it has only gotten bigger since.

Growing up, I had always wanted to be a photographer or a musician, that’s when my stepfather said, “Those are really hard careers to be successful in.” But I formed a film company, called Special Event Television with two other partners right after we got out of Ivey and we got a contract doing all of the feature intermissions for Hockey Night in Canada. We also created and owned Don Cherry’s Grapevine; we produced Bobby Orr and the Hockey Legends and the Original Six. We did all kinds of hockey programs for Boston, Detroit, Toronto, and the rest of the Original Six markets. It was a very successful company and we got acquired three years later. That was my first experience of building something from scratch and having it create value and then be acquired. And from those dollars, I founded SoftKey Software Products, out of my basement on Shaw Street in Toronto, which was the predecessor of The Learning Company. We were Canada’s fastest growing company at the time, and I went to raise capital—and this is a little political in nature, but it gives you an idea of the path that occurred—I went into the international markets trying to raise, at the time, $50 million. Everybody said to me, your company is located in the highest tax jurisdiction in North America; it’s in Ontario where the government at the time put all kinds of constraints and taxes on growth industries, real estate development, and everything else. So, I went to try and see some of the officials in the government and said, “Look, I’m in the software industry, this is a new industry and I’m the fastest growing company in Canada and creating hundreds of jobs. We need to raise capital, and nobody wants to fund us because the shareholders and employees are taxed at ridiculous rates. Can you make an exception for this industry so that you can support it and we can be competitive with the U.S.?” They could not have cared less.
So, we moved the whole company to Boston to get out of the oppressive tax regime. They didn’t get it; software development is not a heavy cap-ex industry, so it can be moved anywhere. We were up and running in Boston within two weeks and never looked back. We became the number one educational software company on Earth. We hired thousands of people all over the world, none of which were in Canada. That gives you an idea of how bad policy affected Canada then, as it does now. I don’t want to get into politics, but the worst investments you could have made in the last five years of all the G7 countries were in Canada. It has been decimated by bad policy and weak, inexperienced leadership. And it just depresses me, you know, I’m trying to do everything I can to make a change there. But that’s a huge lesson learned and I’m just one company with one story. Bad policy creates economic destruction, and that’s what’s happening in Canada right now. Every week there is another story of a company closing shop in Canada and moving billions of dollars and hundreds of thousands of jobs to other jurisdictions. When I was young, I ignored politics, I don’t make that mistake anymore. I’m a global investor now and realize that capital always finds the path of least resistance and that’s not Canada. Nothing gets done or built in Canada anymore. It gets stuck in the meat grinder of government or gets litigated in the courts until the money simply goes elsewhere where it can get a return. Policy matters. I hope some of the cohorts that are graduating at Ivey today consider taking roles in government. The country desperately needs leadership that has more experience, executional skills, and understands how global business works.

**IBR:** Now that you’re a venture capital investor, what makes entrepreneurs stand out when they pitch to you, whether it’s on Shark Tank or outside of the show? Do you have any tips for aspiring entrepreneurs at Ivey?

I have investments in over 40 companies now, with all kinds of great men and women entrepreneurs. I’m very proud to support them; but the ones that are successful on a tactical basis in today’s world, understand they need two things to thrive. The first is: they must find a market that you can acquire customers in economically. If you can’t figure out a way to acquire a customer economically within three years, you go bankrupt. In other words, if it’s costing you $8 to acquire a customer that only gives you $5 of profit or lifetime value, you’re going to fail. The successful companies figure out what they need to do to form a direct relationship with their customer and acquire them on an economic basis. If you can do that, you are going to win. When I teach, that’s what I lecture about. What is your strategy for customer acquisition? Every successful company, as a startup, has figured out how to acquire customers economically. The second thing is: I want great entrepreneurs that are willing to work 25 hours a day and forget about life balance. To succeed you must be prepared to let your business consume you because there’s someone in Mumbai or Shanghai that is ready to work harder and eat your lunch. Understand that we’re competing globally; if you have a good idea, you’re going to get knocked off in five minutes.

**IBR:** Splitting your time between 40 businesses, your investment funds, and your charitable projects, how do you manage all these responsibilities while maintaining your personal life?

I enjoy working. I think it defines who I am. I tried retiring for three years, I didn’t like it. I got really bored. To me working is living and living is working, I just love to compete, but to pull it off you need great people around you. Alex Kenjeev, who runs O’Leary Ventures, manages the private portfolio with his group. I have a social media and PR team managed by Kirsten Rudyk and Nancy Cheung, and they work with all the television networks and all the social platforms like LinkedIn, Facebook, Instagram, YouTube, and Twitter. It’s a complicated integration. I have four million followers on these platforms, and we publish every day, and that is how we communicate with them directly. That’s the way the world works today, you need to build your own broadcast network. When you’re building your brand and supporting entrepreneurs and their products and services, you help them with television and social media, you help them get the message out. That’s part of the value I bring to the equation in any investment I make. I say, look, if you become part of my portfolio, you’re going to get the benefits of hundreds of thousands of people everyday learning about your company and your product. Each year we gather all my CEOs down in South Beach and we have a conference. Since we spend so much in digital advertising, I can get the executives from Amazon, Facebook, Twitter, Google, and LinkedIn to come out and educate our CEOs on what’s changed on each of their platforms and how to get more productivity from their ad spend since the algorithms are changing all the time. I can’t run their business for them, but I can certainly tell them what not to do and the mistakes I’ve made in the past. I think I add a lot of value from that perspective. I don’t consider myself an ordinary investor, we bring extraordinary value to the companies we invest in and ask to be compensated accordingly but I don’t have to sell that to anybody. My CEOs do that for me.

**IBR:** Given the fact that you have been involved in so many things since your first ice cream job, what would you say your proudest achievement to date is?
Well, I'm very proud that today I can actually afford to be a photographer and sell my work for charity or that I can afford to go into a recording studio and make music. All the music on our social media is stuff I've written and played. I was a shareholder in Fender for a while, so I have many guitars and I'm crazy about watch collecting. And so, the whole idea is that if there's certain passions that you have in life, the pursuit of entrepreneurship is not about the greed of money, it has nothing to do with it. It's about the pursuit of personal freedom. Every entrepreneur I've ever met that's been successful does not remember the day they became a multimillionaire. It just happens because you're so passionate about what you're doing. What it does give you later in life for all hard work you have done, is the freedom to pursue anything you want.

IBR: You mentioned some of your passions like music and we've also heard you're quite interested in wine. Could you tell us a little bit about how your passions have intertwined with your professional career?

My stepfather taught me about wines when we were living in Switzerland and France and at an early age when I was a teenager. I got very interested in various varietals, particularly Burgundian wines and various Bordeaux. I have five wine cellars around the world now and I invested in wine futures. About seven years ago I thought: why is it that 97 per cent of wine sold in North America, the largest wine market on Earth, is sold for under $14 a bottle? So, if you're going to be successful in the wine business you must be able to make a great wine for under $14 and I thought that was a huge challenge. I started O'Leary Fine Wines seven years ago, and today I'm the largest purveyor of wine on QVC because in the U.S. you can ship directly to customers in 41 states. Shipping direct to your customer cuts out three tiers of distribution and increases gross margins by 60 per cent.

We don't have that in Canada because we have extremely bad policy. It's at the provincial level that really hurts the wine business. Provinces are trying to protect their regional markets and they can't see the big picture. It's extremely difficult for Canadian wine makers to ship wine from B.C. to Quebec or Ontario. It's a huge problem. Also, in Canada we make it almost impossible for wine producers to ship directly to their customers anywhere in the country. Again, I am bashing bad policy, but the reason that the wine industry is held back in Canada is that the policy is destructive. As Canadians we strive to make free trade deals with other countries, but we have massive barriers and tariffs between provinces. How stupid is that! However, after expanding into the U.S., O'Leary Fine Wines is now profitable after three years of losses. I have a rule: If a business is not profitable after three years of operation, I take it out behind the barn and shoot it. With the wine business, it was a close call! But I love it and my consumers are constantly leaving me their reviews on my YouTube channel. I introduce new blends based on their preferences. That is the major advantage of selling direct.

IBR: Thinking back to the time when you were an Ivey student, in what ways did your MBA help you succeed today as the owner of so many different businesses?

That's a great question. The answer is that it's the people I met in that class that I've stayed in touch with all these decades that have been so important in building out my career. People don't understand that about the MBA or HBA program. It's not what you learn in the class, it's the people you meet. I might annoy some professor or someone saying this, but the truth is, the value that I got out of that period were all these incredible people that are all around the world today. When I was raising money, I was making phone calls to Hong Kong to some of my classmates, to New York, to San Francisco, to Toronto. They're everywhere, they know I'm an Ivey grad and that they're Ivey grads. I once made a phone call saying, look, I'm trying to raise $500 million, for an acquisition that The Learning Company was making, and I need to get a syndicate together. It was all Ivey grads all over the world in almost every financial market that made it happen.

Those contacts are just invaluable. If you're going to quote me, it's not what you learned in the classroom, it's who you met there. The network is powerful, and it just grows every year as graduates go out to become leaders in their industries.

IBR: If you could go back and give yourself advice as a university student or MBA student, what would you tell yourself?

I would tell myself to start earlier. I wish I had done more earlier on. The younger you are, the more you should try because the minute you get married and you have kids, you have responsibilities and mortgages, it gets harder and harder. It's better to take chances early, just get out, maybe spend a year working for somebody and then do your own thing. Not everybody's going to pursue entrepreneurship, maybe about a third of the class will. Many will go on to illustrious careers as bankers, lawyers, and engineers working for somebody else. But if you have it in you to be an entrepreneur, don’t wait, get going, there is nothing like it!

The subject matter of this interview does not necessarily reflect the views and opinions of the Ivey Business Review or Ivey Business School.
Facing a declining traditional beer market, Molson Coors should create an incubator for craft beers to diversify revenue streams.

David Li & Yanyan Law
The First Sip

Molson Coors Beverage Company (Molson), a leading multinational brewing company, was formed by the merger of Molson and Coors in 2005. The company's flagship brands include household names like Miller, Coors, and Molson Beer. On a volume basis, Molson is the seventh largest brewer in the world and controls 24 per cent of the North American beer market. Despite its dominant position, traditional beer brewing volumes have been declining as consumer preferences have shifted towards more premium, health-conscious alternatives over mass-produced beers. This trend has led to a rise in the popularity of craft beers and coolers, and a subsequent industry-wide diversification to reduce reliance on household name-brand beers. Despite past efforts to enter the craft beer and hard seltzer markets, Molson's revenues have continued to decline, with a 2.5-per-cent decrease from 2018 to 2019. Going forward, the company does not have a clear solution to conquer the craft beer market; Molson's strategy of building new brands from scratch takes considerable resources with little guarantee of a return on its investment, and its acquisition strategy requires a lengthy due diligence process requiring significant up-front capital.

Brewing Problems

While the broader alcohol market has seen moderate growth, beer sales have declined slightly. In 2018, overall U.S. beer volume sales were down 0.8 per cent, compared to craft beer sales, which grew by 3.9 per cent and now comprise 13.2 per cent of all U.S. beer volume. The rise in popularity of craft beer has led to a surge of new breweries across the country, growing from 1,447 in 2005 to 7,450 in 2018. These smaller craft breweries specialize in niche products with unique tastes, ingredients, and a focus on higher quality. Currently, 98 per cent of U.S. breweries are considered craft breweries. Despite the industry's lower volume, craft beer has captured 24 per cent of the market's revenue due to premium pricing and growing demand.

While craft brands are more profitable than their mainstream counterparts, craft brewers struggle to get their products into the hands of the end consumer. Following the end of Prohibition in the U.S., a three-tiered system was established to regulate the alcohol industry. Producers, such as Molson, must sell to distributors, who then sell to retailers, who in turn sell to the end consumer. The three-tiered system gives the states more control over alcohol sales as each participant at each step needs a state license to run their business. When deciding to sell new products, distributors consider aspects like price, quality, packaging, and marketing plans—things that craft brewers cannot execute as well as established brands. Furthermore, these profit-minded distributors naturally gravitate towards the larger players in the industry, with some distributors going as far as labelling themselves as “Anheuser-Busch” or “MillerCoors” distributors. The lack of volumetric discounts for craft breweries relative to larger players creates a strong barrier to entry. With over 3,000 independent distributors in the U.S., craft breweries are forced to navigate a complex network if
they wish to get their products on shelves across the country. Significant cash flow must then be allocated towards internal marketing efforts to convince distributors to sell to retailers, increasing the pressure for craft breweries.

Unfortunately, craft brands also lack something else very important: customer loyalty. 70 per cent of craft beer drinkers tend to make purchasing decisions at the shelf, meaning most customers do not have a brand in mind when buying beer. Without a stable base of customers, craft brewers must constantly innovate to win consumer interest. This forces craft brewers to reinvent the wheel rather than focus on efficiency, and it shows; about 2.7 per cent of craft breweries closed in 2018. Without a reliable product to fall back on, craft beer’s ability to appeal to the new consumer has also become its vice, generating a hyper-competitive environment driven by high innovation and marketing costs. This lack of loyalty reflects why Molson continues to struggle even after acquiring major craft brands, such as Blue Moon and Creemore Springs.

Crafting Solutions

In the age of craft beers and coolers, traditional brewing giants must find new ways to compete. While a few alternative alcohol brands like White Claw and Mountain Man are experiencing sustained growth, Molson should not look to introduce their own imitations of these products, but rather grow through partnerships with up-and-coming craft brewers.

To gain access to smaller brands, Molson should start a brewing incubator that leases brewing capacity to craft breweries and offers consulting services, similar to Y-Combinator—helping aspiring brewmasters avoid the traditional start-up costs associated with opening a brewery, providing Molson’s expertise in the alcoholic beverage industry, and sharing its existing distributor relationships. In exchange, Molson would take an equity stake in each of these craft brewers. Due to Molson’s scale, smaller breweries could leverage Molson’s distribution network to gain access to a much larger market by expanding outside of their own region. These craft brewers could scale with Molson, renting additional
capacity when needed, or terminating contracts when unsuccessful. Molson’s suite of executives would also offer unrivaled expertise in product development, business development, marketing, and mentorship to these budding brands. By providing consulting services, Molson creates an attractive platform for potential partners. These new brands can eventually supplement Molson’s decline in sales, while sheltering them from the direct risk of launching new brands.

For those craft brewers with established manufacturing that are struggling with capacity and distribution, Molson should offer production capacity and access to their supplier and distribution relationships. Without the help of Molson, a craft brewery trying to enter California from Michigan would have to find a beer distributor in the area and convince the company to distribute its low-volume beer. Then, the craft brewery must dedicate a sales team to convince retailers to buy its beer since distributors are not inclined to promote beer that cannot be sold in high volumes. All of this could be overcome if craft breweries leverage Molson’s existing distributor relationships. In exchange for these services, Molson would receive a convertible debt note. If partner brewers achieve certain benchmarks, Molson would have the option to convert its debt to equity in the company and participate in future growth. This agreement would offer downside protection for Molson while ensuring that the company benefits from the growth of the partner brewer. The partner brewer is also ensured that Molson is heavily invested in their growth. Otherwise, the agreement remains a standard contract brewing agreement.

**Tapping into the Future**

As the second largest brewer in the North American market and an experienced contract brewer, Molson is the best positioned firm to capitalize on this opportunity. Declines in sales volume have opened capacity for this venture and Molson’s recent equity investment in L.A. Libations, a non-alcoholic beverage incubator, demonstrates its willingness to explore new diversification strategies. The incubator will increase its exposure to the growing craft beer market, while overcoming pervasive issues of brand loyalty.

This also provides a natural path to acquisition. When craft brands have enough growth and momentum, the established partnership over many years will increase the likelihood of Molson being able to acquire its most-proven brands instead of launching its own. To further incentivize acquisition, contracts for the incubator should mature and require renegotiation. Molson could then use its size to force the dependent craft brewery to join the Molson brand. Given the fragmentation in the industry, a diverse portfolio of brands is the best way to capture market share. The incubator program allows Molson to seek out successful brands and expand its portfolio, without the risk and start-up costs associated with launching new product lines. These partnerships will also streamline traditionally long and cumbersome due diligence processes as Molson will have gathered the transaction information throughout the lifetime of the partnership.

**Taste Testing**

A potential partnership could be formed between Molson and East Coast craft giant, Great Lakes Brewing Company. With $45 million in revenue and a presence in 14 states, Great Lakes represents a successful craft beer brand that has made a name for itself. However, expansion is difficult since additional brewing facilities require large upfront investments. For example, Stone Brewing’s new facility in Virginia cost $74 million and has a capacity of 500,000 barrels per year. In exchange for equity, Molson could provide capacity for Great Lakes’ main brands that is magnitudes greater than what it is currently capable of producing. The partnership will also let Great Lakes bring its signature beer to the West Coast. If Great Lakes can capture only 0.1 per cent of the $9 billion California craft beer market, its revenues would increase by 11-per-cent.

Molson only owns four craft brands between Canada and the United States. Given that larger craft breweries will sell around 500,000 barrels per year, Molson would only have eight per cent of the craft market under optimistic assumptions. If Molson could increase its market share by just two per cent, that would translate to a $552-million increase in revenue for Molson. Given its 24-per-cent share of the overall beer market, Molson could likely achieve this growth through its incubator program.

**Drunk Off Success**

By leveraging its scale and expertise, Molson can create and capture value through its incubator program in a growing market segment. These partnerships will allow Molson to tap into the craft brewing market at minimal cost and grow its product portfolio with successful brands. This formula can be applied all over the U.S. and Canada, since most craft breweries remain regional. With the incubator program, Molson can then share in the upside of its craft brands, giving it a new avenue for growth and keep its taps running.
THE PREMIER LEAGUE: A FAST SPRINT TO FASHION

In the face of rising jersey prices, the Premier League should partner with Uniqlo to offer affordable non-jersey alternatives to fans around the world

Kailas Kumar
The Premier League

The Premier League is the top level of the English soccer league system and the world’s largest soccer league by revenue. Hosting world-class clubs such as Manchester United, Liverpool, and Arsenal, the 2018-2019 Premier League season was watched by 3.2 billion people in 188 countries, making it the most-watched sports league globally. The Premier League has cultivated a loyal fan base both at home and abroad; an online survey revealed approximately 30 per cent of global internet users watching the Premier League on television, of whom 80 per cent watch at least monthly.

Rising Jersey Prices

The Premier League signs long-term kit deals with Adidas, Nike, and Umbra to supply equipment such as jerseys, shorts, and cleats. As viewership of the Premier League grows, teams are demanding ever-higher payments, with Manchester United holding the current record at £75 million per year in a ten-year deal with Adidas. With Premier League deals being more expensive than ever, it is understandable that sportswear companies continuously raise prices to maintain margins.

As far back as 2000, British fans’ concerns with rising jersey prices were acknowledged by the Football Task Force, a government initiative established in 1997. They recommended that Premier League clubs restrict the introduction of a new home jersey to once every two seasons, a proposal which was later implemented in the 2000 Premier League Charter. However, since no legal repercussions accompanied the proposal, the recommendation has been ignored entirely. Clubs have supported other price-reduction measures such as caps on away ticket prices, which benefit clubs by filling stadiums and creating a competitive atmosphere during matches. However, a cap on jersey prices would reduce the value of kit deals immensely, making it extremely unlikely for any club to agree to such a proposal.

The high price of jerseys has also priced out lower-income individuals in developing countries. Markets where support for the top Premier League clubs and demand for secondary products exist include Indonesia, Malaysia, China, Thailand, and India—countries with relatively low GDP per capita and average income. The average Premier League jersey price is approximately £100. While this may be slightly expensive for fans in the developed world, this price level makes official sporting apparel inaccessible.
to fans in the developing world. For example, a single jersey would constitute 6 per cent of the annual earnings of the average Indonesian, equivalent to a C$3,156 expense for the average Canadian. The large fanbase in these geographies of over two billion people represent a significant untapped market for the Premier League.

“Such advantages are crucial to athletic clubs, who often capitalize on recent sports results and media coverage to boost sales.”

**Fast Fashion: A New Opportunity**

To capitalize on this opportunity, the Premier League should partner with fast fashion retailers to make affordable non-jersey sports apparel such as shirts, hats, and accessories. This will create a low-cost alternative for currently priced-out fans to represent their teams. Additionally, the ability of the fast-fashion industry to turn out new products extremely quickly has helped brands like H&M and Uniqlo capitalize on social trends and mainstream fads, making them more accessible to a broader consumer base. This model can be applied to the Premier League, allowing teams to introduce affordable merchandise options to fans worldwide.

**A Unique-lo Opportunity**

Founded in 1949, Uniqlo Co. (Uniqlo) is a Japanese-based fast fashion retailer, primarily targeting young adults between the ages of 16 to 34. It has established itself as the third-largest player in the fast-fashion market. Uniqlo has grown their sales at a compounded annual growth rate of 8.6 per cent since 2016, and has a strong online presence, as well as 2,200 physical locations across 22 predominantly Asia-Pacific countries. Given Uniqlo’s ubiquity and brand recognition, they are well suited to partner with Premier League to implement the fast-fashion team merchandising project for Premier League fans in Asia-Pacific countries.

Compared to the traditional apparel industry, fast fashion relies on shorter cycle times to drive volume and meet rapidly changing trends. Since their products are replenished far more often than other sectors of the apparel industry, flexible and efficient supply chains are necessary. Uniqlo’s production facilities, located primarily in nearby China, Vietnam, and Bangladesh, allow it to achieve short throughput times due to proximity. This geographic advantage further offers manufacturing flexibility, enabling Uniqlo to manage inventory and distribution closely to follow customer demand.

Such advantages are crucial to athletic clubs, who often capitalize on recent sports results and media coverage to boost sales. For instance, New Balance produced Kawhi Leonard “Board Man Gets Paid” and “Fun Guy” T-shirts during the Toronto Raptors NBA championships, with the shirts selling out within one day. Leonard transferred to Los Angeles mere weeks later, demonstrating the time constraint on athletic themed apparel.

Furthermore, Uniqlo offers a pre-established sportswear assembly line, significantly reducing upfront supply chain costs otherwise associated with developing a new product. Since fast fashion is defined by a consistent stream of new products, this existing infrastructure would increase contribution to both parties and make the partnership more attractive.

Uniqlo’s collaborations with designers attract publicity to storefronts while simultaneously allowing the brand to attract new consumer segments. The Premier League’s target markets in Southeast Asia and Greater China are also the countries at the core of Uniqlo’s strong performance, experiencing 20-per-cent and 21-per-cent earnings growth in fiscal year 2019, respectively. A long-term Premier League collaboration would add a high-quality brand to Uniqlo’s portfolio and strengthen its positioning in its fastest-growing markets.

In 2018, Uniqlo entered a collaborative effort with world-famous tennis player Roger Federer. The deal will carry through until 2028 and cost the Japanese brand $300 million, indicating significant interest on Uniqlo’s behalf to engage in sportswear collaborations. Federer’s inaugural release featured a full line of sportswear, including a variety of shirts, shorts, and hats. The collection of items was broken down into a series of geographically targeted launches, focused on London, New York, and Paris. Each launch included different style points, allowing fans from each locale to have their own unique apparel to support their favourite tennis player. A similar targeting strategy should be introduced with the Premier League partnership. Geographically relevant customizations and complete product lines are central to a successful athletic collaboration in this space, as it allows the customer to connect more personally with the collaborator.

**Kicking It Off**

Uniqlo should implement a phased strategy by releasing pieces for highly popular teams first among select
secondary markets: Indonesia, Malaysia, Thailand, China, and India. These countries have sizable fanbases for English clubs and would serve as good entry points for the new Uniqlo-Premier League partnership. Uniqlo should begin with Manchester United, Liverpool F.C., and Arsenal, as these clubs currently lead in jersey sales. Initial sales can give a sense of consumer preferences regarding styles and help forecast demand for future club releases or new product lines.

In each market that Uniqlo enters with this line, it should tailor the design of its offerings to the geography’s identity. For example, countries with hotter climates could primarily receive tank tops in Uniqlo’s sweat-wicking AIRism material while colder countries receive HeatTech long-sleeve shirts. More simply, the flag of the country in which the apparel is being launched could be embroidered on shirt sleeves. These identifiers would also act as a barrier to the global reselling of items meant for developing markets, reducing the cannibalization of current offerings.

Alongside online retail sales, Uniqlo will also be able to generate sales through official club merchandise stores, as well as its own network of over 800 stores across the aforementioned markets. Although there is considerable potential for online growth in these markets, Uniqlo’s online store comprised just five per cent of sales in 2019, suggesting that physical store sales are still a requirement for these markets. This will allow the Premier League to generate revenue from both brick-and-mortar and online sales.

**It’s All About the Fans**

This partnership should lead to increased fan engagement, boosting team awareness among global consumers and heightening their interest through popular team branding. As uproar continues in the world of retail jerseys, this project will create a mainstream environment for fans to represent their teams and participate in fashion trends. When associated clubs play in competitive playoff games and domestic league derbies, loyal fans and local residents can support their city in both modest and expressive ways. Fans overseas will also have access to affordable pieces that will strengthen their association with their favourite clubs and solidify their presence in the Premier League global fanbase. Uniqlo can create the opportunity for anybody in the Premier League universe to celebrate the beautiful game.

“As uproar continues in the world of retail jerseys, this project will create a mainstream environment for fans to represent their teams and participate in fashion trends.”
TYSON FOODS: BEEFING UP THE BOTTOM LINE

Tyson Foods should adapt to industry shifts by leveraging their APAC infrastructure to develop and market plant-based meats

Caitlyn Liu & Adil Khan
A Cut Above the Rest

Tyson Foods, Inc. (Tyson), an American multinational corporation, is the world’s second largest processor and marketer of chicken, beef, and pork. Tyson controls approximately 20 per cent of meat production in the United States, with 36 per cent of revenues derived from beef products. Consumer products comprise Tyson’s largest distribution channel, accounting for 45 per cent of total sales. Since 1935, Tyson has steadily risen up the Fortune 500, and has grown to be Fortune Magazine’s most admired food brand. With a market capitalization of over $25 billion, the company’s operations are supported by 140,000 employees, 42 distribution and cold storage facilities, and two research and development centers, operating across four regions: North America, China & Korea, Asia Pacific (APAC), and Europe.

The Com-pea-titive Landscape

Until recently, investing in the rapidly growing plant-based simulated meat industry has not been a priority for legacy meat producers. Unlike traditional vegetarian meat substitutes, such as tofu or textured vegetable protein, these simulated meat products focus on replicating the taste, texture, and cooking experience of traditional beef, going so far as to “bleed” when cooked. Beyond Meat leads this new sector, posting $92 million in revenue in its most recent quarter—a 250-per-cent increase year-over-year. The company made headlines in 2019 after shares skyrocketed 840-per-cent in the three months following its IPO, and currently maintains a market capitalization of over $5 billion. Impossible Foods, estimated to be the second-largest industry player by revenue, was valued at approximately $5 billion in its Series E funding round. Despite exponential sales growth, both companies are still plagued by supply shortages in the face of unexpected consumer demand. Some analysts expect the meat substitutes market to reach $140 billion by the end of the decade, which would constitute 10 per cent of the $1.4 trillion global meat market. As a result, large legacy players like Nestlé, as well as many new startups, are entering this market with their own meat substitute products. Simulated meat alternatives represent a significant market opportunity that Tyson must pursue to persist as an industry leader in the long-term.

A Mis-steak-en Approach

Plant-based meat alternatives are currently priced at a premium relative to traditional animal products. Beyond Burger patties sell at Whole Foods for $12 per pound, while ground beef sells for approximately $5 per pound. This is primarily due to underdeveloped supply chains for primary ingredients driving up costs—namely, yellow-pea protein. Beyond Meat simply does not have the scale to compete on price with mainstream meat producers, nor does it have the logistical capabilities to adequately fulfill North American demand. Beyond Meat has struggled to manage its supply chain, and currently sources raw materials from multiple vendors in North America and Europe. Recognizing its scale advantage along existing supply chains and the costly nature of purely plant-based alternatives, Tyson launched its Raised & Rooted line—a product catering to “flexitarians” with products consisting of animal and plant proteins mixed together. Tyson’s
current alternative offering targets health-conscious consumers with an alternative to meatless products that is approximately 17-per-cent cheaper on average.

However, companies such as Beyond Meat have made supply chain improvements their main priority, with the expressed purpose of driving costs down to attain pricing parity with traditional meat products and Tyson’s Raised & Rooted products. For example, Beyond Meat signed a new multi-year sourcing agreement with French pea producer Roquette, granting access to a new $400 million plant that will substantially increase supply when operational in the fourth quarter of 2020. More robust supply chains for raw materials combined with economies of scale, improved infrastructure, and cost cutting plans, will threaten Tyson Foods’ ability to gain an early foothold in the market.

Once Beyond Meat implements its cost-cutting plans, Raised & Rooted will lose its pricing advantage, eliminating any distinct upper hand over both fully simulated meats and real meats. Demand for meat substitutes is primarily driven by both desire for healthier alternatives which are better for the environment and ethical beliefs of preventing animal cruelty. By incorporating ground beef into its blended patties, Tyson’s Raised & Rooted product line has neither the realism of regular meat nor the health benefits of fully-plant-based meat. As vegans and flexitarians seek to minimize their meat consumption through purely plant-based proteins, while omnivores can consume real meat at a significantly lower price point than Raised & Rooted, mixed-meat products do not offer a particularly distinct value proposition.

Going Beyond Raised & Rooted

Given that Raised & Rooted does not offer the most competitive value proposition to any consumer group, Tyson’s current product must be replaced with an alternative that competes directly in the 100-per-cent plant-based meat market. Tyson can use existing partnerships with yellow pea producers developed for Raised & Rooted, in combination with its immense R&D capabilities to develop a meat alternative that directly challenges Beyond Meat. However, it may be difficult for Tyson to compete against existing brands in North American markets given incumbents’ pre-established relationships with franchises and existing brand recognition. Beyond Meat is already carried by several major retailers, including Walmart, Whole Foods, Safeway, and Target, with Walmart alone offering its products in over 2,207 locations.

Tyson prides itself on its global operations, with each region having domestic production, logistics, and administration. Tyson should launch a new simulated meat product in its APAC division, which encompasses Malaysia, Thailand and Australia. By locking up the primary yellow pea suppliers from Australia, the world’s sixth-largest pea producer, Tyson would be able to launch across APAC, where it already holds existing relationships, infrastructure, and expertise. This would effectively lock North American incumbents out of the region, due to their lower cash positions. Consequently, companies like Beyond Meat would be forced to source and produce internationally, driving up logistical costs and ultimately, price.
Despite small local players such as Malaysia’s Phuture Foods and Thailand’s Charoen Pokphand Foods, demand is mostly unserved, with no incumbents of scale. Current competitors in APAC generally source their raw materials elsewhere and are forced to ship from North America or Europe to APAC for distribution. By focusing on local production and distribution, Tyson will be able to enter the market with an inherent cost advantage, as it eliminates the intermediate and shipping expenses associated with production based in North America. For example, Beyond Meat has retail operations in APAC, but does not currently source from there, inflating prices. By using the existing supply chains for pea protein that are used for Raised & Rooted, Tyson will be able to outcompete Beyond Meat on price. Tyson’s foray into APAC would make market entry significantly harder for Beyond Meat and other competitors in the future—once Tyson locks up the local supply of yellow pea proteins, competitors with lower capital resources will have difficulty following.

With demand forecasted to increase 9.4 per cent annually through 2025, this region exhibits strong growth prospects for plant-based meat products. APAC countries have large vegetarian populations, primarily due to religious reasons. This is also complemented by increasing urbanization and westernization, with one in three urban Thais consuming more non-animal proteins in 2017 compared to 2016. In total, the APAC meat alternatives market size is projected to be $1.9 billion by 2023. Further, this strategy also enables Tyson to potentially expand into the North American market in the future. By partnering with South Asian restaurant chains like Jollibee that are preparing to enter the American and Canadian market, Tyson would be better positioned to gain brand recognition and market share in international markets.

Meat-ing APAC Consumers

Tyson should initiate APAC market entry in countries with higher GDP per capita, namely Australia, Singapore, and New Zealand. Consumers in these countries will be able to afford the initially higher prices associated with this new product. As scale is achieved through expanded numbers of retail partners and distribution channels, prices will decrease. Tyson should then expand to Malaysia and Thailand—nations with prominent existing Tyson operations and lower GDP per capita. This can be done with a separately branded line of products, to prevent devaluing the original brand launched in Singapore, Australia, and New Zealand. To accommodate different cultural tastes,
CONSUMER

Tyson can conduct consumer research and introduce diversified product lines—for example, ground pork dumpling filling in countries with a more Eastern palate, and hamburger patties in more Westernized markets.

“By launching a fully meatless product in the APAC region, Tyson will be able to gain dominant market share in a previously fragmented market.”

To take further advantage of unmet demand in countries with high rates of vegetarianism and veganism, Tyson should then launch products in countries like Indonesia and Vietnam. GDP per capita and average household income of these states, however, are lower than that of Australia and New Zealand. Despite this, Tyson’s ability to conduct large scale marketing, as well as connotations of quality associated with Western brands, will allow these meat substitute products to be positioned at a premium to traditional protein items. Further, Tyson should strategically focus on urban areas with higher discretionary income. Sales efforts should concentrate on fast food establishments, as adoption of the Tyson simulated meat product could occur at scale, as opposed to individual restaurants and retail establishments. As several APAC-based fast food chains, such as Ichibanya and Jollibee, are aiming to move into North America, with Jollibee set to open 150 stores in the U.S. and 100 in Canada by 2023, this strategy will allow Tyson to achieve international brand recognition and gain a foothold in other markets.

This tiered approach will allow Tyson to maximize market share while capitalizing on existing distribution relationships and brand recognition, as well as provide a launching pad for further expansion. Given the rapidly growing APAC market for alternative meat products, if Tyson can achieve similar market share in APAC to Beyond Meat in North America—approximately 25 per cent—it should post around $240 million in incremental revenue, representing a 4-per-cent increase over existing APAC revenues.

Bringing Home the Bacon

The plant-based meat substitute industry is growing at a rapid pace, with increasing consumer preferences towards sustainability, health, and ethics. Consequently, to adapt to a changing landscape, Tyson must compete directly with incumbents to ensure sustainability and growth in the future. By launching a fully meatless product in the APAC region, Tyson will be able to gain dominant market share in a previously fragmented market while inhibiting the ability of cash-strapped competitors to launch in the future. Not only can this increase Tyson’s annual revenue by $240 million, but it will also enable Tyson to effectively compete in North America as APAC food chains expand globally.
Of course, we would be pleased to work cooperatively with legislators in Canada and around the world on any legislation that impacts the digital economy.

IBR: Not all policymakers are familiar with relevant issues in technology, particularly given the pace of innovation in the field. How do you handle dealing with uninformed lawmakers?

KC: Technology is always changing and evolving, and I dedicate a lot of time towards informing and educating stakeholders, including policymakers, about new products and services, and about how the platform works.

IBR: Europe's enactment of the General Data Protection Regulation has mandated increased transparency surrounding consumer data. Do you envision North America following suit to give consumers more ownership over their data?

KC: Canada has a very robust privacy law in place, called the Personal Information Protection and Electronic Documents Act (PIPEDA). PIPEDA is a very interesting example of a third way between the U.S., where there is no national privacy framework, and Europe, where the GDPR is highly prescriptive. By contrast, PIPEDA is technology neutral and principles-based. It protects people's privacy while fostering innovation, and I think we should be proud of this made-in-Canada approach to privacy protection.

IBR: In your opinion, what constitutes ethical data mining?

KC: People should own their data, and be able to control what they share and with whom, period.

IBR: What is the greatest barrier to Facebook's goal of "building a global community"?

KC: Building a global community is obviously challenging, given the many social, cultural and economic forces that need to be navigated. From a technical point of view, two-thirds of the world's population is not connected to the Internet, which has enormous social and economic costs for people and societies. This is why our connectivity teams are working across dozens of countries to help overcome the global Internet connectivity challenges of accessibility, affordability, and awareness—with the hope that one day, everyone will have high-quality Internet access.

IBR: In addition to your role at Facebook, you are heavily involved with nonprofits and very civically engaged. How does your public policy experience help you in this regard?

KC: I feel very fortunate to be able to pursue my passion for public policy both in my work at Facebook, and with the nonprofits that I am involved with, including the boards of Kids Help Phone, MediaSmarts and the University of Ontario Institute of Technology. In my work and in my personal life I am driven by the opportunity to have a positive impact in the lives of others.

IBR: Many Ivey students have limited experience with public policy. What advice would you give to these future business leaders?

KC: While you may not always see it or feel it, public policy touches every aspect of our lives. This is true for businesses, too. In order to be successful, future business leaders need to not only understand public policy, but take an active role in working with governments and civil society to achieve outcomes that are good for the country and good for the world.

IBR: What is the most valuable lesson you've learned throughout your career?

KC: Take risks in life and in your career. You will grow so much, both personally and professionally, from the wonderful experiences you will have along the way.
Under Armour should partner with Equinox to expand into the fitness club industry

Justin Li & Shivani Pradhan
Riding the Bench

Since its inception in 1996, Under Armour has been recognized for its performance fabrics that help consumers realize their full athletic potential. With $5.3 billion in global sales in 2019, Under Armour is ranked as the fourth leading athletic apparel, accessories, and footwear company. However, fourth place may be just as good as being on the bench in the fitness apparel and accessory industry. The company has struggled relative to industry leaders like Nike, Adidas, and Lululemon, especially in North America. This presents a key issue, as North America comprises 69 per cent of the company’s global 2019 net sales revenue. Subsequently, Under Armour has seen its stock price decline 62-per-cent over the last five years.

This decline in sales revenue can be attributed to several reasons. One of the primary drivers is a shift in consumer preferences from performance-focused sports apparel to more fashionable alternatives, with brands like Adidas significantly outperforming Under Armour. Through its highly successful portfolio of athleisure footwear and collaborations with high-profile celebrities such as Pharrell Williams and Kanye West, Adidas has seen its stock price skyrocket over 200 per cent over the last five years. Under Armour has attempted to replicate this success by collaborating with prominent celebrities like ASAP Rocky, but its focus on performance and lack of consumer familiarity in the athleisure and streetwear space have been barriers to this strategy’s success.

Another driver is Under Armour’s reliance on wholesale distributors to sell apparel in North America. Decreased demand from these wholesalers due to bankruptcies and declining foot traffic suggests that the brand’s distribution strategy is also contributing towards declining sales revenue. Approximately 90 per cent of Under Armour’s North American stores are outlet stores. While the outlet stores provide a necessary avenue for Under Armour to sell last season’s clothing, deep discounting at retail outlets suggests that Under Armour’s brand equity has weakened and the company has lost pricing power. These factors have ultimately led Under Armour’s brand perception to decline. While Nike and Adidas are respectively ranked as first and third of the 2019 Top 50 Most Valuable Apparel Brands by Brand Finance, Under Armour dropped from 19th to 25th from 2018 to 2019.

Despite Under Armour’s former CEO, Kevin Plank, stating that the company would “double down on performance” at the end of 2018 and focus on core competencies, the company has failed to rejuvenate its sales growth since. It has become clear that Under Armour must change its brand perception to adapt to the current retail landscape and re-establish its place as a leading sports apparel provider.

Emergence of Tech and Fitness

Recent technological advancements have allowed consumers to enhance their workouts. Wearable technologies such as FitBit have enabled consumers to track health information, allowing them to easily understand their fitness performance and progress. Apple Watch has also experienced great success as a result of Apple’s refined ecosystem. These technological advancements have been met with strong enthusiasm: 80 per cent of consumers have expressed interest in wearing fitness technology, and the wearable technology market is expected to reach $54 billion in annual revenue by 2023.

Under Armour’s previous attempts to capitalize on the wearables market have failed. Under Armour’s Health Box, a kit of wearable smart technology, failed to compete against FitBit and Apple Watch, reporting an operating loss of $44 million after just one quarter.

Beyond just wearable technology, advancements in streaming have also enhanced the workout experience. Technology companies such as Peloton and Mirror have allowed consumers to stream workouts led by high quality instructors inside the comfort of their own homes, improving the at-home fitness experience. While at-home workouts are becoming increasingly popular, the demand for traditional gyms still exist; the gym franchise industry is expected to grow at an annual rate of 2.6 per cent until 2024.

Conversely, brands such as Peloton have seen success due to their luxury connotations that appeal to exercise enthusiasts. To effectively capitalize on these trends, Under Armour must be able to deliver a premium experience, provide users with a greater incentive for adoption, and drive habitual use.
Emergence of Boutique Gyms

Experiential boutique fitness clubs—gyms with niche product offerings—are an industry trend that Under Armour could capitalize on. Between 2012 to 2015, memberships to boutique fitness studios grew by 70 per cent while “big-box gym” memberships only grew by 5 per cent. The American College of Sports Medicine’s Health and Fitness Journal ranks activities found at such gyms, including group fitness, high-intensity interval training, and functional fitness training at second, third, and ninth in popularity, respectively. Strong interest in unique experiences over traditional workout routines, whether through boxing, indoor cycling, or yoga, has contributed significantly to the increased popularity of boutique fitness clubs. The decrease in the size of the American middle class over the past few decades has resulted in more premium and discount gyms. Gyms like Planet Fitness offer very affordable and accessible hours, whereas Equinox and its portfolio of brands such as SoulCycle provide a premium experience that attracts customers looking for a specialized workout experience.

Under Armour & Equinox

Under Armour should seek new opportunities to market its products in new venues through a strategic partnership with Equinox. With $1.4 billion in sales in 2018 and a diverse portfolio of brands that capture the upper class fitness enthusiast market, Equinox is the ideal fitness club partner for Under Armour. With SoulCycle “boasting 13 years of brand building, and Equinox just shy of 30”, Equinox has not only the financial capabilities and dedicated consumer base, but also the positive brand associations to uplift Under Armour.

Such a partnership will enable Under Armour to leverage its prior expertise in fitness tech and portfolio of prominent celebrity athletes to enhance Equinox’s fitness club offerings and provide consumers with a high-end, premium impression of the Under Armour brand.

Virtual Classes

With various high-profile athletes such as Stephen Curry, Anthony Joshua, and Tom Brady signed on with the Under Armour brand, the company can create and film virtual class content that complement the various fitness offerings Equinox currently offer. Virtual training sessions can be shown on large screens in interactive rooms where guests are coached by professional athletes, while still receiving live feedback and critique from trainers in the room. The allure of a boxing class designed in collaboration with heavyweight champion Anthony Joshua would be tremendous—not unlike the appeal which has driven the success behind the online education platform, MasterClass. By providing video classes filmed by stars such as Serena Williams and Gordon Ramsay, MasterClass has proven that there is significant demand for classes taught by high-profile celebrity experts. This content will also synergize well with Equinox’s venture into on-demand in-home fitness, scheduled to launch in late 2020. By getting Under Armour’s brand and celebrity athletes both at the gym and at home, Under Armour will significantly increase its brand exposure among fitness enthusiasts.

Wearable Tech

Under Armour can also introduce its investments in fitness technology into Equinox’s clubs, further enhancing the premium workout experience that the brand is known for. To emphasize Equinox’s current experience-based value proposition, Under Armour can enhance the social aspects of exercising through an app that pairs with wearable tech and in-gym hardware. Connected fitness experiences like Peloton, The Mirror, and Zwift use fitness equipment that enables users to gain deeper insights on their workout and record their performance improvement over time. With Equinox launching a similar at-home device, an Under Armour branded wristband like that of OrangeTheory would further supplement workout experiences with physiological data such as heart rate or calories burned. Since technology-focused hardware that lack a social aspect, such as Fitbit, face an abandonment rate of approximately 30 per cent, the human interactions brought forward by the Equinox partnership are crucial for the success of Under Armour’s wearables.
While Under Armour’s wearable tech products have seen lackluster performance in the past, the cross-branding opportunity introduces a new consumer base comprised of Equinox members, encourages habitual adoption, and lends legitimacy to Under Armour’s products.

**ADDITIONS TO APPAREL LINES**

![Image of Under Armour and Equinox branded apparel]

**Apparel Sales**

Ultimately, the partnership with Equinox needs to rejuvenate sports apparel sales, which still make up 66 per cent of Under Armour’s revenue. To do this, Under Armour should seek to design new lines of athletic clothing and footwear co-branded with Equinox and exclusively available to members. By including its most premium performance fabrics, the clothing should not only satisfy the functional expectations of high-performance fitness enthusiasts, but also serve to add to the prestige of being a member of a premium fitness club such as Equinox. This creates a positive feedback loop where more members will be drawn to the Under Armour brand due to its association with a premium fitness experience, further increasing its brand recognition and appeal.

Additionally, with Under Armour’s branded retailers such as Sports Authority, Sears, and Macy’s closing stores and minimizing their brick-and-mortar presence as mall traffic declines, selling products in more experiential spaces such as Equinox are beneficial to boosting financial performance. Furthermore, selling products at gyms will provide Under Armour with more control over its pricing strategy, allowing them to regain a premium brand perception while simultaneously realizing higher margins.

**Let the Games Begin**

Under Armour and Equinox should launch this cross-branding opportunity under Equinox’s primary gym brand to capitalize on the premium brand perception. Further, the firms should stagger launch, starting out in major metropolitan hubs like Los Angeles and New York. Through an invite-only trial for high-profile and high-net-worth individuals, as well as a comprehensive social media campaign, Under Armour can increase both perceived exclusivity and awareness for the initiative. Its 2020 “The Only Way is Through” ad campaign was created fully in-house and features several of Under Armour’s prominent celebrity athlete partners such as Stephen Curry and Michael Phelps. Similar promotions could enable Under Armour to remind customers of its corporate identity while setting the stage to launch a brand partnership with Equinox.

With the success of the Equinox partnership, Under Armour could begin examining further opportunities in the gym industry to increase its brand perception. Events such as pop-up gyms for basketball where celebrity athletes like Steph Curry could hold workshops would drive even more merchandise sales and awareness.

**From the Bench to the Starting Lineup**

Equinox has approximately 400,000 members enrolled in its 106 name brand premium gyms. Assuming that 10 per cent of members are introduced to Under Armour apparel through new streaming classes and cross-branding, the initiative can realize $175 million in revenue over the next five years. While this revenue would allow Under Armour to break even on partnership and R&D costs, most of the top-line growth will come from spillover effects and publicity. With a new premium perception making the brand more attractive, as well as additional media attention, Under Armour can grow its market share in non-performance customer segments significantly.

**A New Era for Under Armour**

Pursuing an Equinox partnership would enable Under Armour to defend its position through leveraging its strengths in brand partnership and connected fitness. By developing a premium brand perception through associations with Equinox, driving tech wearable and apparel sales, and reaching a new customer base, Under Armour can finally step onto the athletic apparel podium.
ARGENTINA: DON'T CRY FOR THE HEDGE FUNDS

Despite having conflicting objectives, Argentina and hedge funds should cooperate in the ongoing restructuring to maximize payoffs

Roy Zhang
In February 2020, Argentina announced an ambitious objective of restructuring over $200 billion of foreign currency backed bonds by March 31. This entails significant debt reduction for holders of Argentine debt, many of whom are distressed debt hedge funds—hedge funds that invest in debt with a high probability of default—seeking to profit from the debt crisis. While the conflicting objectives of the government, hedge funds, and other debtholders may seem to make a clash inevitable, a cooperation scheme may be the best strategy for Argentina and the distressed hedge funds to maximize their respective payoffs.

The Art of the Holdout

In 2018, Argentina went into recession while its inflation skyrocketed. Then-President Mauricio Macri’s centre-right administration implemented austerity measures to fight the economic crisis, but these measures proved to be highly unpopular and led to the installment of a new administration under centre-left politician Alberto Fernandez in December 2019. As the Fernandez government came to power, it had the unfortunate task of rebuilding an economy crippled by inflation and dealing with a debt crisis. With only $8.9 billion in net foreign reserves, Argentina has to service over $200 billion of foreign debt and an additional $44 billion International Monetary Fund (IMF) loan coming due in the next two years. This foreign debt consists of two large bond tranches issued from 2005 to 2010 by the government of Cristina Fernández de Kirchner and those issued by Macri from 2016 to 2018. If significant debt relief is not achieved, it is almost certain that Argentina will default on its debt and be shut off from the international bond market. Argentina’s deteriorating financial position is further exacerbated by the IMF’s refusal to renegotiate the terms of its refinance its loans unless Argentina significantly reduces its leverage. Without the IMF’s support, it is almost certain that Argentina will default on the $60 billion of payback obligations it faces in 2021.

Investors have fled Argentine bonds throughout these unfortunate developments: Argentine bond prices have dropped more than 60 per cent within the last twelve months. In contrast, distressed debt hedge funds have rejoiced at this opportunity. An alliance of 20 hedge funds have been purchasing Argentine bonds at very low prices with the intent of using a “holdout” strategy to increase their returns. In a holdout, a creditor refuses to renegotiate the terms of its debt in the hopes that the struggling debtor will acquiesce and pay them in full.

If a debt crisis is a sovereign bond investor’s nightmare, holdouts are the bond issuer’s nightmare. A holdout is a classic Prisoner’s Dilemma: if every creditor chooses to holdout, no one gets paid and the sovereign’s economy collapses under the debt burden. However, if most creditors have negotiated to provide debt relief, there could be a lucrative payout for the few that do holdout.

ARGENTINA’S FOREIGN RESERVES VS LOANS

The Sovereign’s Got Potential

Argentine bonds can be split into two categories: the “Kirchner” bonds issued by the former Kirchner administration in 2005 to 2010, and the “Macri” bonds issued by the Macri administration from 2016 to 2018. Both of these groups feature a holdout defence mechanism known as the Collective Action Clause (CAC); so long as a predefined supermajority of bondholders—85 per cent for Kirchner bonds and 75 per cent for Macri bonds—agree to a restructuring proposal, CAC allows all bonds within a voting pool to be restructured. There are two different types of CAC structures: single-limb and double-limb. While over two-thirds of the bonds, the Macri bonds, are issued with the more advantageous single-limb CAC, $87 billion of the bonds are Kirchner bonds with a double-limb CAC that still have significant holdout potential.

Consider a tranche of Kirchner bonds, denominated in U.S. dollars, due in 2038. Any given bond can only be restructured with 85 per cent approval from the holders and if there is two-thirds approval within the tranche. If a hedge fund can obtain one-third of the total face value of the tranche, then they have the ability to veto any restructuring plans and elect to holdout. With this position, the holdout is not just their share of the debt: they will be able to prevent the restructuring of the entire tranche. This is also why a wide pricing differential currently exists among the different Argentine bonds: bonds with higher CAC thresholds command almost a 50 per cent price premium over similar bonds with lower CAC thresholds.
Argentina is facing the challenge of managing reacting to these activist hedge funds. The current administration previously took a stance against holdouts when it passed a law that made the act of paying holdout creditors illegal—a law repealed in 2016 under international pressure. It also has the support of the IMF, which has recommended significant debt relief from Argentina’s private creditors. Private creditors generally lack legal remedies against sovereign countries, and are therefore at a disadvantage in negotiations with Argentina. However, Argentina’s self-imposed repayment schedule and the urgency of receiving IMF’s refinancing make the prospect of a stalemate with hedge funds disastrous for the country. Both parties appear to be in a deadlock that they cannot escape. If they holdout, hedge funds are exposed to a high probability of being unpaid indefinitely; yet if they relent, they risk losing significant bond value upfront. If it is uncompromising with holdouts, Argentina risks missing its deadlines and worsening its relationship with the IMF; on the other hand, relenting consists of paying hedge funds using the cash that it is desperately strapped for.

A New Argentinian Cooperation Scheme

Restructuring is usually a zero-sum game; there is a finite amount of loan value to be split among participating parties, and a better outcome for one always means losses for another. However, the payoff matrix becomes complicated by the sheer number of different parties that exist. While debtors play against creditors, individual creditors also compete amongst themselves. Individual creditors can claim value in the amount of their investment and also by taking a greater share from their peers. Argentina and the hedge funds could cooperate by choosing to pay off obligations to the hedge funds at the expense of other investors. The hedge funds would use their positions to vote for Argentina’s proposals of extending the maturity on the foreign debt. By doing so, the hedge funds will get a better payoff while preventing other investors from being paid. For hedge funds, this involves a guaranteed upside and is relatively easy to execute as they will receive more of their principal back. For Argentina, the hedge funds’ support would be paramount in saving valuable time as it rushes to meet the IMF’s timeline, as the Kirchner bonds held by the hedge funds are the most difficult to restructure due to their higher CAC threshold. Overall, Argentina will achieve the same amount of debt relief, to the satisfaction of both Argentina and the hedge funds.

however, even if the hedge funds own the entirety of the $87-billion Kirchner bonds, they are still vastly outnumbered by the $200-billion Macri bondholders. With the CAC vote threshold for Macri bonds at 75 per cent, if the terms are obviously unfair, it will be extremely unlikely for Argentina and the hedge funds to successfully pass their proposal through other creditors. Moreover, Argentina is also bound by its covenants to treat creditors fairly—this will be the first sovereign restructuring where the new “Uniformly Applicable” (UA) covenants become involved.

VOTING SYSTEMS APPLIED TO NEW ARGENTINIAN COOPERATION SCHEME

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“Restructuring is usually a zero-sum game; there is a finite amount of loan value to be split among participating parties...”
UA mandates Argentina to offer every bondholder within a tranche voting pool the same treatment. As long as a cooperating hedge funds’ bonds are being restructured in the same group as another investor, they must receive the same financial instrument from the restructuring.

**Keep the Money Rolling In**

Due to the unique dynamic of this restructuring, UA may aid this cooperation scheme. By nature, this debt crisis is driven by liquidity. Argentina simply does not have the cash to cover the $44 billion IMF loan maturing in the next two years. With a debt-to-GDP ratio of 93 per cent, Argentina has the economic ability to pay off its debt, and therefore does not need to prioritize principal reduction. Rather, it must prioritize pushing out the maturities of the debt in the coming years to minimize the strain on liquidity. This indicates the bonds maturing in 2021, for example, are of a significantly higher priority to restructure than a bond maturing in 2033. All the Kirchner bonds mature between 2033 and 2038 and are therefore secondary in priority. This allows for a clever scheme as follows:

Argentina creates a voting pool where 75.1 per cent of bondholders are cooperating Kirchners and 24.9 per cent are Macri bondholders with debt maturing between 2021 and 2024. It then offers to exchange all debt within this pool for a new set of bonds maturing in 2038. On an net present value basis, the cooperating bondholders will be taking on a minimal or no loss, as their original bonds either mature close to or in 2038; for their counterpart in this pool, losses could be massive (the 2021 bonds would lose 35 per cent of their face value, assuming a discount rate of just 6 per cent). The CAC forces those voting against the proposal to accept the terms enforced by Argentina and the Kirchner bond holders.

Even assuming a 0 per cent participation rate from Macri bondholders, $29 billion of Macri bonds can be forcefully restructured in this manner. With a 50 per cent participation rate, this increases to $87 billion—equivalent in value to all outstanding Macri bonds due before 2028. Effectively, this strategy would relieve Argentina of short-term obligations and push them out to a more manageable timeframe, solving the country’s liquidity issues.

These calculations assume that general bondholders will be defensive against the cooperation scheme. In reality, while the cooperation scheme will decrease other bondholders’ NPV, particularly those with near-dated bonds, maturity extensions are typically preferred to principal reductions from an investor’s standpoint. This is due to the higher potential upside from market price increases as Argentina’s economy recovers in the future. By cooperating with the administration, the distressed debt hedge funds can also allow Argentina to adopt a restructuring mechanism that may be preferable for other investors as well.

Instead of restructuring different bonds on an ad hoc basis and where the less important Kirchners may present a holdout risk, this cooperation turns the table around. Now, Argentina can wholeheartedly focus on restructuring the bonds with the highest priority, with the Kirchner bondholders assisting them in the process. Improvements in Argentina’s near-term liquidity also increases the likelihood that the IMF continues extending relief credit to the country as it works to strengthen its economy.

“By cooperating with the administration, the distressed debt hedge funds can also allow Argentina to adopt a restructuring mechanism that may be preferable for other investors as well.”
INSURANCE REFORM: WEATHERING THE RISK OF CLIMATE CHANGE

Insurance companies should partner with governments to address growing costs stemming from climate change

Katie Zanatta & Sameeksha Tirikollur
Record-breaking global temperatures driven by greenhouse gas emissions, rising water levels, and atmospheric vapour have led to an increase in both the frequency and magnitude of adverse climate events. Extreme global weather conditions such as droughts, forest fires, and severe storms have doubled since 1980. Carbon Brief, a U.K.-based climate change publication, shows that 68 per cent of all extreme weather events were either caused or amplified by greenhouse gas emissions and anthropogenic environmental degradation of key ecosystems.

Ecological infrastructure refers to naturally occurring ecosystems that provide invaluable benefits to surrounding communities, including disaster risk reduction. Coral reefs in coastal ecosystems, for example, function as a barrier against hurricanes, storm surges, and flooding. Wetlands are similarly effective in mitigating the risk of flooding in coastal areas and inland river basins by acting as natural drainage systems. Mountain forests on hillsides protect against soil erosion and the threat of avalanches and landslides by increasing slope stability. The degradation and erosion of these ecosystems have a substantial impact on the severity of these climate events.

While it is possible to respond to environmental disasters with reactive measures like building levees, these efforts often damage ecological infrastructure and limit the long-term potential of environments to protect against natural disasters. In the case of Hurricane Katrina, the levees built during the disaster contributed to the degradation of nearly 1,900 square miles of wetlands. Yet according to the University of Florida Soil and Water Sciences Department, every 2.7 miles of wetlands reduce storm surges by a foot. Hence, it is essential to prioritize the conservation of ecological infrastructure for its long-term benefits.

**Deficit Disaster**

Extreme weather conditions come with a hefty price tag. In 2018 alone, natural disasters generated global economic losses close to $225 billion. Of this figure, uninsured losses were estimated to be around $135 billion. This global protection gap, defined as the difference between total economic losses and insured losses, places undue strain on the governments of affected countries to provide aid, thereby exacerbating the economic shock of natural disasters. Hurricane Katrina increased the federal budget deficit by an unanticipated $100 billion in 2005, highlighting the reality that natural disasters have severe, fiscal impacts that are difficult to plan for.

When quantifying economic losses, macroeconomic models account for the direct costs associated with climate events such as physical damage, restoration costs, and loss of productivity. These models fail to consider indirect losses which account for the long-run economic impacts of climate events, including loss of economic production and consumption, subsequent healthcare costs, and loss of life. While Hurricane Katrina triggered $125 billion in property damage, its true economic cost was closer to $250 billion when accounting for indirect costs.

In 2018, insured losses of $90 billion accounted for the remaining global cost of natural disasters. This was recorded as the fourth costliest year on record for the industry, outlining an emerging trend in insurance of increasing annual costs. This trend is particularly concerning for property and casualty (P&C) insurance companies who are responsible for property protection coverage in the case of an injury or accident. In 2009, StateFarm terminated all homeowner policies in Florida after a proposed 47-per-cent rate increase was rejected by regulators. The proposal was brought forward in an effort to mitigate the risk of high payout costs within the hurricane-prone state. Increasingly, P&C insurers have responded to a changing climate by raising premiums and terminating policies in volatile regions. With the increased occurrence of catastrophic climate events, P&C insurers must deal with unprecedented levels of risk when underwriting high risk geographies which demand more frequent payouts.

Both government institutions and private organizations have fallen victim to the repercussions of climate change. The environmental and economic costs of climate change are too high for one stakeholder to bear, challenging the status quo and practicality of current reactive solutions to catastrophic events.

**The Power of Partnership**

Governments and insurance companies are facing parallel challenges resulting from the heightened costs associated with natural disasters and climate change. Combining business objectives with public goals presents a unique opportunity to create public-private partnerships (PPP) that could leverage the political power of public institutions in conjunction with the increased access to capital available within the private sector. Proposed partnerships would involve insurance companies working with the federal government in a two-pronged approach to mitigate financial and environmental risk.

**Breaking the Ice with Backstops**

First, insurers would provide coverage up to a predetermined threshold with the governments providing a
financial backstop for any excess amounts. Governments would partake in financial backstopping in the context of P&C coverage for private property owners. This practice of financial backstopping, common in the reinsurance industry, limits the amount of risk that P&C insurers would undertake in areas like New Orleans or Southwestern Ontario, both of which are highly susceptible to flooding. Research conducted by the Property and Casualty Insurance Compensation Corporation in Canada suggests that insured losses in excess of C$30 billion begin to threaten the solvency of otherwise healthy insurers. While this threshold is unique to the Canadian insurance landscape, similar considerations should be made when determining a backstop threshold for countries around the world.

In exchange, P&C insurers would make insurance policies more affordable and widely accessible due to reduced financial risk. Financial backstopping would close the global protection gap, decreasing the reliance on government programs and taxpayers for disaster relief funds. Historically, federal disaster relief spending in Canada averaged C$100 million in the 1990s and grew to C$600 million in the 2000s. This figure is expected to reach C$902 million annually in the coming decade. Governments have historically spent more on reactive solutions rather than investing in proactive, risk-reducing mechanisms. Financial backstopping creates an opportunity to engage in better budget management by improving financial predictability of unforeseeable events that have a severe impact on public finances.

**A Plan for the Planet**

There is also an opportunity to shift the way governments and insurers approach ecological infrastructure. Ecosystems like wetlands, forests, and coastal systems are invaluable assets in disaster risk reduction and investments into ecological infrastructure reduce the environmental risk by both insurance companies and the government.

Nature-Based Insurance Plans (NBIPs) would provide P&C coverage for ecosystems that reduce the risk of natural disasters, thus funneling capital investment into ecological infrastructure. The cost of such policies would be dispersed across public and private stakeholders in the municipalities benefiting from these ecosystems, thus reducing the overall cost of investing in ecological infrastructure for all stakeholders. In addition to purchasing an insurance policy, a portion of the premiums paid by stakeholders participating in NBIPs would be reinvested in development and maintenance initiatives to support and rehabilitate degraded ecosystems.

Following an adverse environmental event, payouts from the insurance provider would cover the costs of repairing and rehabiliting the ecological infrastructure being underwritten. Reinsurance company Swiss Re piloted this proactive strategy in Quintana Roo, Mexico, by partnering with local environmental groups and underwriting the coral reef situated in the Yucatan Peninsula. A Business Insider report found that the success rate of restoring key ecosystems was higher for underwritten regions due to the fast mobilization of resources provided by insurers.

For example, with the introduction of NBIPs, wetland rehabilitation programs would reduce damage costs by 38 per cent in urban communities by improving the water drainage capabilities of surrounding land. As insurance companies are subject to lower payouts and work to gradually decrease disaster risk the firms would be able to pass-on saving to consumers. A lower protection gap
ultimately improves the economic resilience of an economy when recovering from economic shocks such as natural disasters and better equips governments and insurance companies in navigating increased environmental and financial risks presented by climate change. Lloyd’s estimates that for every one per cent of costs covered by private insurance, the cost to taxpayers or governments in the aftermath of climate related disasters is reduced by 22 per cent.

POTENTIAL REDUCTION IN PROTECTION GAP

A Conservation Conversation

The attitudes and political agendas of governments toward sustainability are a key element to the success of a PPP targeting climate change. Consequently, Europe offers the ideal political landscape to engage in such partnerships within the insurance industry. The reason for this is twofold. First, the political interests of European Union (EU) countries prioritize environmental concerns, creating a suitable environment to foster innovation in climate change initiatives through PPPs. Additionally, European countries collectively bear a very high stake in supporting and protecting one another from climate disasters. A report from Munich Re determined that flood risks in Europe often span over multiple countries. For example, a high flood risk in the UK also implies similar risk levels in Northern France, the Netherlands, and regions of Germany. While previous models analyzed the financial impact of disasters on a per country basis, damages are ultimately compounded in this area due to the high degree of financial codependence amongst countries in the EU.

On Cloud Nine

Given the high cost of addressing climate change, obtaining the financial support of insurance companies is key to support the economic and social wellbeing of a country. Rising numbers of insured citizens eases the demand for costly relief funds, allowing public institutions to redistribute resources towards other economic objectives. By introducing the financial backstop alongside insured ecosystems, this allows entire communities to rebuild infrastructure faster—a key element to maintaining long-term economic growth. Research has shown that economies with a higher proportion of private insurance coverage recover faster from natural disasters than do economies that rely on relief funds. NBIPs also provide a vast number of environmental benefits through the rehabilitation of degraded ecosystems, creation of natural carbon reservoirs, and nurturing of biodiversity. These environmental benefits further align with the current emphasis on sustainability prevalent among EU countries.
BOSTON DYNAMICS: A CHANCE TO COMMERCIALIZSE

Boston Dynamics should look towards offshore wind energy to commercialize their first industry ready robot, Spot

Shahryar Safdar & Zain Huda
BOSTON DYNAMICS: A CHANCE TO COMMERCIALIZE

Rising in Robotics

Boston Dynamics is a robotics manufacturing company spun off from MIT in 1992. The company is best known for its human- and dog-like robots that move similarly to their living counterparts. Since its founding, Boston Dynamics has heavily invested into research and development to build robots for a variety of industrial and commercial use cases. Despite this emphasis on research, the company has experienced a tumultuous history, with limited success in commercializing its products. After a 2013 acquisition by Google X and subsequent resale in 2017 to SoftBank, Boston Dynamics is under considerable pressure to begin producing commercially viable products.

Navigating Rough Terrain

Boston Dynamics’ industry peers have traditionally struggled to achieve profitability, with many ventures shutting down after failing to acquire customers. The root of this issue lies in the substantial capital investment needed to build robots, as well as the technical challenges in replicating and automating skilled human tasks. For instance, Boston Dynamics partnered with the U.S. Department of Defense to create four-legged robot BigDog that was subsequently rejected because it was too loud for military applications.

Boston Dynamics has since created an advanced robotic dog known as Spot. Spot can navigate over irregular terrain, across physical barriers, and has its own Software Development Kit (SDK) that allows users to extend functionality and capture telemetry data. In light of pressures to generate revenue, Boston Dynamics should launch a commercialization strategy centered around Spot.

The Winds of Change

Offshore wind farms are particularly well-positioned for a transition to robotic automation. Wind farms currently account for 0.3 per cent of global power generation, with usage expected to increase 15-fold and investment estimated to be $1 trillion by 2040. Governmental shifts toward carbon neutrality policies and sustainable energy sources have made wind farms increasingly popular, and the public reputation Boston Dynamics could gain by servicing this sector could ease its entry into other industries.

Offshore farms benefit from the comparably higher wind speeds available relative to land-based farms and have achieved pricing parity with conventional power sources in Europe. However, generators in offshore wind turbines produce alternating current (AC) electricity, which is susceptible to considerable power loss across the long distances back to shore. Consequently, offshore farms require an electrical substation platform to conduct the complicated conversion process to direct current (DC) electricity that can be brought back to shore with minimal power loss.

Currently, one of the largest challenges facing offshore wind farms is the need for preventative maintenance on converter platforms. Platforms are comprised of several complex piping systems, cooling systems, and wiring systems which require regular inspection. Given that offshore farms are typically 200 to 300 kilometers away from land, using AC current is not a viable option for wind farms. Hence, energy generated by windmills need platforms for successful operations.

From a financial perspective, the high costs of downtime mean that any idle or defective platform parts create substantial opportunity costs for farms. Each additional

GLOBAL OFFSHORE WIND CAPACITY GROWTH

![Graph showing global offshore wind capacity growth from 2011 to 2018.](source: GWEC)
day of downtime can result in a loss of approximately 20 megawatt-hours of electricity production per turbine. With offshore wind farms facing an annual downtime average of 6.4 days, this would result in lost revenue of approximately $5 million per year. Risks in transmission issues on the platform is a core reason for downtime, which emphasizes a need for preventative maintenance. Additionally, harsh conditions, complex equipment, and the high concentration of flammable, electric materials results in a dangerous environment for offshore workers. With 27.1 annual deaths per 100,000 offshore workers, the mortality rate at offshore wind farms is seven times higher than that of the average U.S. workplace.

**Inspection Imperfections**

With its reliance on human workers, current preventative platform maintenance efforts are susceptible to several errors. For one, workers lack the ability to replicate a systematic, error-free inspection process. Given that human inspection is observation-based, key risk assessments are both subjective and non-quantifiable. Hence, not only is there variation in exact methodology from worker to worker, but the accuracy of historical data and perceived trends is uncertain. Ultimately, preventing potential downtime is difficult without quantitative measures of risk and highly standardized detection methodology.

Sensors—one of the key pieces of technology currently used in preventative maintenance—also pose various challenges. As they are in fixed positions, sensors are not always optimal for collecting essential data like the thermal imaging of certain pipes or imaging of oil levels. Moreover, sensors can only collect data, but lack the ability to process or analyze trends. In the long-term, not only is it costly to update old sensors, but their fixed locations on paths must be updated regularly to accommodate for changing platforms. Considering these issues, wind farms could be better served with dynamic, adaptable technologies which can process and quantify risks.

**New Dog, New Tricks**

With its real-time data analysis features and adaptable, mobile body, Spot offers superior preventative monitoring abilities compared to current methodologies. For one, as a nimble robot, Spot can move through sites without difficulty, eliminating the need to reposition sensors. Not only can Spot implement inspections outside a worker’s eight-hour day, but it can also detect problems that are dangerous for humans such as leakages, hot spots, gas leaks, and degradation of equipment. During detection, Spot can quantify any risks, and immediately notify operators, limiting damage and costs.

Compared to fixed sensors, Spot’s removable and replaceable attachments make it both easier and less expensive to upgrade equipment. Whereas changing the layout of platforms would require redesigning the path of sensors, Spot’s dynamism and self-navigation abilities ensures that it can adapt to various environments. As sensor equipment develops and improves, it is also more cost efficient to upgrade sensors on one robotic device compared to replacing fixed sensors dispersed across a platform. Additionally, Spot’s advanced computing power allows it to go beyond the ability of sensors by analyzing trends, generating insights, and ultimately predicting defects.

When inspecting the converter platform, Spot offers comprehensive functions to evaluate the health of equipment parts and pipes. After collecting data from its embedded sensors, the robot uses computer vision to compare real-time data to standard operating ranges. Surpassing the scope of physical checks, the data collected and processed by the SDK allows operators to understand the overall health of their platforms, areas at risk, and the impact of construction or environmental changes. Over time, this data becomes increasingly valuable as Spot’s machine learning capabilities can identify trends in equipment degradation and determine the probability of high-risk situations before physical symptoms appear.

**SPOT’S USE CASES**

With its technological and navigational capabilities are well-suited for many specific use cases aboard offshore substations with regards to preventative maintenance. Spot’s thermal imaging systems, for example, can develop heatmaps for the oil-based cooling systems on transformer wiring, cable trails, pumps, and other components to detect issues that would otherwise go unnoticed to the human eye. Likewise, 3D imaging technology aboard the unit can dynamically map the environment and floor plan to identify
anomalies in structure, malfunctioning equipment, and errors in machine systems. Spot can also perform visual and aural analysis to detect excessive noise or irregular visual cues. The base technology available through these systems are superior to most competitors like ANYBotic’s ANYMal robot. Spot offers 30-times zoom and 360-degree visual cameras for higher fidelity inspections; ANYMal, by comparison, only offers a 10x zoom camera system. Leveraging superior technology and data analytics, Spot’s accuracy and usability will accelerate with time and use.

Finally, compared to competitors like ANYMal, Spot’s main technological advantage lies within its advanced robot arm. This arm allows Spot to complete tasks such as opening doors and grasping objects, which are outside ANYMal’s capabilities. Given the importance for robots to be self-functioning, Spot’s arm substantially increases its tactical usefulness on offshore platforms. By leveraging Spot, wind farms can improve current inspection processes, detect potential equipment defects and ultimately limit the significant annual opportunity cost associated with downtime.

**Rise of the Underdog**

To commercialize its technology with wind farms, Boston Dynamics should begin by running trials with Spot through a tactical partnership. The goal of the pilot should be to refine pain points in Spot’s interactions with human operators and test the reliability of collected data. These trials will require significant collaboration with wind farms to define the scope of the robot’s tasks and determine optimal hardware attachments. Additionally, to build credibility for its technology and meet safety standards, Boston Dynamics should pursue ATMosphere EXplosible (ATEX) certification from the European Union. This certification ensures that Spot is equipped to deal with potentially explosive equipment found in some wind turbines.

Given the current status of global wind farms, Boston Dynamics should pursue a partnership with Orsted, a company which operates Walney—one of the largest offshore wind farms in the world. With 59 per cent of its revenue derived from offshore wind, Orsted is a suitable partner which could reap material benefits from Boston Dynamics’ technology. In 2019, Orsted generated $1.02 billion in revenue from the sale of power, with employee expenses accounting for 38 per cent of costs. By implementing Spot on farms, Orsted should be able to realize significant cost savings of up to $25 million. Once the initial hurdles of wind farm operations are ironed out and safety certification is obtained for offshore operations, Boston Dynamics can aim to target a broader market with Spot.

**Dog Days are Over**

As Boston Dynamics aims to shift from functioning as a research and development organization to generating revenues, the company should deploy its robotic dog Spot in wind farms. By capitalizing on nearly 30 years of research expertise, Boston Dynamics’ cutting-edge technology provides wind farms an opportunity to implement superior preventative maintenance methodology which can tackle the multi-million-dollar downtime gap. Looking forward, Boston Dynamics could expand Spot’s use cases to other industries including offshore oil drilling. Within these industries, the risk of human error and the need for real-time analytics means that technologies like Spot would be invaluable. Ultimately, the time has come for Boston Dynamics to embrace Spot’s departure from academic laboratories and towards industry-wide commercialization.
Impinj should expand into the luxury retail space to meet the growing consumer need for product authentication

Darren Guo & Harsh Shah
Counterfeiters have long been a threat for the fashion industry, diverting sales and damaging the brand equity of top retailers. The rise of ecommerce and social media has made high fashion more visible than ever and provides the conditions for a counterfeit luxury good industry to flourish. The proliferation of counterfeits increases uncertainty in transactions in the secondhand market and hurts both buyers and sellers that care about the authenticity of their products. The global market for counterfeit products is estimated to be $600 billion per year, of which the luxury subsegment accounts for $12 billion. With the rise in counterfeiters diminishing the exclusive nature of luxury products and damaging retailer brand equity, companies must find ways to ensure the authenticity of their products.

**ID’ing the Problem**

Impinj is an industry leader in high performance mixed signal solutions for radio frequency identification (RFID), security, and digital processing products. Their products see usage across a variety of industries including retail, supply chain and logistics, aviation, automotive, healthcare, and industrials. Pressures in the industry to advance technological offerings have pushed Impinj to invest in research and development at the expense of necessary commercialization efforts. Market adoption of Impinj’s proprietary platform have been slower than anticipated, with limited top-line growth over the past three years and negative profits since 2015. To remain financially viable, Impinj must find new markets in which to sell their product: an end-to-end solution that provides retailers and other users with a platform to manage their radio frequency identification (RAIN) network.

**RAIN** is an RFID technology that enables devices to communicate wirelessly and identify and track tags attached to objects. These tags are made of a radio transponder, a receiver and transmitter. To access the data, an RFID reader emits an electromagnetic pulse which triggers the tag to send data back to the reader. This pulse allows the tag to be out of the line of sight of the reader. RFID technology includes a variety of frequencies and standards, including RAIN and near field communication (NFC). The luxury retail industry should use Impinj’s proprietary Monza Chip to certify the authenticity of luxury goods in order to combat rising counterfeiting risk.

**Technology Threads**

Impinj should create a partnership with incumbents in the luxury goods industry and utilize its proprietary RAIN technology to verify the authenticity of products. Among previous partnerships within the retail industry, Impinj worked with La Chapelle to integrate RFID technology into the company’s supply chain, improving warehouse efficiency and reducing labour costs. Partnerships with luxury goods companies could result in economies of scale due to recent consolidations within the high-end fashion industry. RFID technology has not yet achieved widespread penetration and represents an opportunity to capture market share for luxury product authentication. The ability to authenticate a product means the good-
faith consumer can verify a seller’s claims. Contrastingly, those who deliberately sell counterfeit products will face a higher risk of being prosecuted by the authentic retailer as the counterfeit seller is engaging in illicit activity.

Case Study: The Genius of Moncler

Precedent for the value of authentication can be seen in the case of Moncler, an Italian fashion brand primarily known for its luxury down jackets. Despite the construction of Moncler products being predominantly comprised of very technical fabrics, the company has also struggled to keep the counterfeit market at bay. This is partly because a portion of sales occur online and result in a lack of transparency for consumers. In 2009, a new form of identification tag provided by a third-party company, Certilogo, was implemented on all Moncler products. Following the success of that partnership, Moncler decided to move the operation in-house and introduced their own proprietary codes in 2013. The most recent update to the tags occurred in 2015 when Moncler added an RFID chip into their tag. A tangible financial impact was realized that same year in a landmark case against a particular counterfeiting organization when a Beijing court awarded Moncler €420,000 in damages.

Moncler’s ability to effectively mitigate counterfeit losses is assisted by their industry-leading stance on authentication over the past decade. Their efforts have resulted in over 100,000 counterfeit sellers being delisted from search engines, and over 5,500 counterfeit retail websites being shut down entirely. If a brand like Chanel can replicate Moncler’s success in authentication, they could recapture a significant fraction of the value being lost to counterfeit sellers.

Partnership Avenues

In order to prove the value proposition of its RAIN technology, Impinj should first look to partner with Chanel, a brand with an established image in the luxury space. Chanel has been slowly integrating technology into its product mix over the years, creating its own app and investing in 3D printing. This proven interest and capacity for digital transformation makes Chanel the ideal target for a partnership with Impinj.

Counterfeiting has traditionally represented an issue for Chanel, requiring the dedication of significant financial and human resources. The brand has claimed that it is “at any given time” involved in multiple lawsuits against counterfeiters. For certain Chanel products, supply is also often limited in retail storefronts, inclining buyers to turn to second-hand retail markets. This increases their risk of exposure to fake goods, thereby driving down customer perception of both quality and exclusivity. Thus, a solution specifically focused on authentication will help to preserve Chanel’s brand equity and protect it from material losses as a result of counterfeiting.

IMPINJ’S AUTHENTICATION PROCESS
Authentic Style

Impinj should begin their Chanel partnership as soon as possible to integrate chips into the upcoming clothing season. The two companies should create an official app that will allow users to individually authenticate the product at any time, thereby protecting prospective buyers. The cost of implementing this into a supply chain will likely be minimal for Chanel while resulting in a material return for Impinj. Mini bags in the Chanel Summer 2020 collection start at $3,725, and Chanel has operating margins of approximately 29 per cent. Each tag can be sold at a price of $0.20 per unit to guarantee lifetime authentication. At $0.20, each unit would reduce margins for Chanel by only 0.005 per cent on the mini bag—a negligible amount. This will not have a material impact on variable cost for Chanel and serves to protect the brand from the potential damages of counterfeiting.

Chanel’s 2018 revenues of $11.1 billion represent approximately three per cent of the estimated overall luxury goods market. Applying that 3.0-per-cent ratio to the $12 billion lost by luxury brands due to counterfeiting implies that Chanel potentially lost approximately $360 million, or about 3.2 per cent of its current revenue. The average market selling price is around $0.1501 and Impinj can increase the selling price to $0.20 per unit given the lifetime service it will provide Chanel. This can be expanded to other product lines such as ready-to-wear clothing, which adds another line of revenue for Impinj.

In the long-term, Impinj should continue to target mainstream luxury brands like fashion conglomerates LVMH and Kering. The high value of these brands makes implementing an authentication platform a worthwhile pursuit for the retailers and would give Impinj the exposure it needs to continue expanding in other domains.

Stitching It All Together

Impinj should capitalize on a strategic partnership with the luxury fashion market to achieve top-line revenue growth. This partnership represents a tangible solution to a material problem for brands as they have losses totaling an estimated $12 billion due to online counterfeits. As sales of high-end products continue shifting towards ecommerce, protecting brand equity and preventing counterfeits become increasingly important for global fashion houses. Ultimately, this symbiotic relationship allows Impinj to commercialize their technology in a new market segment while simultaneously protecting the brand equity of global fashion houses.
LYFT: UNPROFITABILITY, A HEAVY BURDEN TO LIFT

Partnering with parking management companies can provide Lyft with a unique and profitable revenue stream

Jessica Hu & Raymond Shi
Starting the Engines

Launched in 2012, Lyft provides peer-to-peer on-demand ridesharing services in over 300 cities in the United States and Canada through a mobile-based application. As the second-largest ridesharing app by volume in the U.S., Lyft has revolutionized personal mobility alongside its primary domestic competitor, Uber Technologies. Both companies have since expanded their product offerings with the additions of shared bikes and scooter networks, and information portals for public transit routes in select cities. Although the ridesharing industry is projected to continue growing at a compounded annual growth rate (CAGR) of 19.9 per cent through 2025, global incumbents in the ridesharing industry have not proven the long-term profitability and viability of the business model. In 2019, Lyft grew revenue by 68 per cent to $3.6 billion while net losses nearly tripled to $2.6 billion. Despite management promising profitability by 2021, investors have become increasingly skeptical as net losses grow. Consequently, Lyft shares have fallen 36 per cent to date since their highly anticipated IPO in 2019.

Stuck in Traffic

Today, Lyft faces two pressing issues: differentiating itself from its larger, diversified competitor Uber, and determining a plan for achieving profitability. While Uber has popularized food delivery services on its mobility platform, Lyft has yet to offer additional services that have been as widely adopted. Although the company has built a reputation for being friendlier to both drivers and consumers, this has not helped increase market share as price remains the dominant motivator for drivers and consumers alike. Uber drivers reported earning $2.24 per hour more than Lyft drivers, helping Uber develop a stronger driver network and cementing the company’s command of 69 per cent of U.S. rideshare spending; Lyft captures only 30 per cent as of December 2019.

Profitability continues to elude incumbents in the ridesharing industry. In addition to allocating 60 to 80 per cent of ride fares toward driver compensation, platforms frequently offer rider incentives, such as monthly discounts, to grow their active user base. Lyft has relied heavily on this user acquisition strategy, subsidizing one-third of its rides in February 2019. Lyft forecasts profitability on an adjusted EBITDA basis by year-end 2021, but given the hyper-competitive, low margin rideshare environment, investors remain skeptical.

To the detriment of top-line performance, Lyft reduced rider incentives in the second and third quarters of 2019 leading revenue growth to fall significantly in both quarters. As a result, Lyft management decided to reimplement rider incentives in the fourth quarter. This highlights the commodity-like economics of the ridesharing industry, characterized by price competition and low customer loyalty. Consequently, operators feel competitive pressure to offer subsidies to acquire new customers and retain existing ones. The ongoing price war makes profitability a significant challenge.

The Opportunity of a Lyfetime

Despite its reputation as a slow-moving industry, the U.S. parking management industry is expected to continue growing at a 10.8-per-cent CAGR between 2020 and 2025. Increased urbanization has resulted in traffic congestion, pervasive accidents, and increased emissions, creating a need for effective and flexible parking management solutions.
Despite ridesharing’s promise to change mobility habits, household vehicle ownership has continued to grow in the U.S. This has led to increased traffic and pollution, which have put a strain on quality of life for city residents. Urban drivers often spend up to 20 minutes searching for parking, as a result of poor awareness of parking spot locations, lack of information on lot vacancies, and expensive pricing. In New York, the average car owner paid $5,395 in parking fees annually in 2017, while cruising around the city to find parking spaces cost an additional $3,334.

The fixed pricing model currently employed by parking facilities is not efficient. Since supply of parking spaces is fixed, and prices do not take into account variable demand, average occupancy rates hover around only 60 per cent in Toronto. The vacant capacity available thus represents a significant opportunity for parking management companies to adjust their pricing to better monetize their parking assets.

Dynamic pricing is a strategy in which prices are flexible and adjusted depending on the level of demand, allowing operators to achieve a targeted occupancy rate. During periods of low occupancy, prices can be lowered to drive demand, while premium prices can be charged when occupancy rises above the target rate. By achieving a higher occupancy rate, parking lots can capture additional revenue typically lost from vacant spaces in a fixed pricing model.

With growing traffic congestion, low occupancy rates, and increasing competition, there has been a significant shift in the priorities and strategies of parking and transportation companies. The emergence of startups in the parking space, such as ParkMobile, ParkWhiz, and SpotHero, has enabled users to see maps of available parking spaces, reserve individual spots, and make in-app payments. This is complemented by the high adoption of payment technologies, which have reached 47-per-cent saturation. Parking companies have also begun integrating more technology into their offerings, with platforms like REEF Technologies—an alliance of seven parking management companies—providing next-generation digital kiosks and detailed data collection, which can be used by the operators of parking facilities to maximize the value of their assets.

**An UpLyfting Proposal**

Lyft should leverage its sophisticated dynamic pricing algorithm and mobile platform to establish partnerships with parking management companies. An ideal partner
could be Impark, a company with 4,600 parking assets across 400 cities in the United States and Canada. A member of REEF, Impark has had limited forays into dynamic pricing in the past, including a pilot project in Chester County, Pennsylvania, partnering with small, targeted startups that focus on parking technology. Impark has not expanded beyond this, as the apps used for partnerships simply do not have the scale or user base of a large company such as Lyft. In comparison, Lyft's large existing user base of over 22.3 million will provide an automatic data collection base for pricing. By using a modified version of Lyft's dynamic pricing technology, Impark can increase revenue by maximizing occupancy rates. From Lyft's perspective, partnering with Impark provides an avenue to increase revenue to fund its future investments and build brand awareness, especially in cities currently dominated by Uber.

Ready for Lyft-off

Lyft should develop an integrated LyftPark mobile feature within Lyft's current application. It will include a live map showing occupancy rates and dynamic pricing of nearby parking lots while also offering a secure mobile payment system. Impark parking lots are set to go through a transformation as a part of the REEF Technologies alliance, so that all its parking lots will be updated with modern, smart technology. Lyft can assist in this transformation by providing the software algorithm needed for dynamic pricing, which can be easily displayed on the screens for users to see when they enter any Impark lot. Since Impark lots will already have the hardware, they can implement this partnership much more easily as they will not incur significant incremental costs.

Lyfting the Top Line

To ensure the partnership is financially beneficial to both Lyft and Impark, revenue will only be distributed to Lyft for transactions made through the app. Revenue from customers using pay stations at parking lots will still be allocated to Impark. However, revenue generated from the app will be split between the two companies: 50 per cent will go to Impark and 50 per cent to Lyft.

Lyft should initially roll out LyftPark in 10 major cities across North America with an Impark presence. Examples of dense, urban cities which LyftPark can target include Toronto, Chicago, Los Angeles, Houston, and New York City. Assuming that LyftPark will eventually be rolled out to all 4,600 parking lots, this new initiative could potentially generate $134 million incremental revenue for Lyft annually.

Driving Into the Future

By implementing the LyftPark platform, Lyft will be able to collect an abundance of user data and insights into the parking management industry. By establishing a first movers' advantage within this industry, they can also partner with more parking lot management companies in the future to bring onto their platform. With this first step, Lyft can build its expertise in developing sophisticated dynamic pricing algorithms and establish an innovative new revenue segment to achieve growth.
VERMILION ENERGY: SMALL FIELDS, BIG RETURNS
Vermilion should reduce geographical risk by capitalizing on promising trends in the Netherlands
Aleem Virji & Owen Thurston
**Company Background**

Vermilion Energy (Vermilion) is an exploration and production company headquartered in Calgary, Alberta. It operates across ten different countries in three continents. A market darling of the past, Vermilion historically stood out with its differentiated and geographically diverse asset base, historically trading at greater than a 2x premium on an Enterprise Value to Debt-Adjusted Cash Flow (EV/DACF) basis. However, over the past two years Vermilion has seen this industry premium vanish. The multiple compression can be attributed to Vermilion’s growing asset base in Canada following the acquisition of Spartan Energy in April 2018. Canadian production increased from 46 per cent to 60 per cent of overall corporate production, subsequently shrinking Vermilion’s premium to less than 1x.

Vermilion’s recent slump is not indicative of a long-term collapse. The company’s current dividend yield is over 15 per cent, nearly equal to its expected 2020 capital expenditures. Vermilion management has made it clear they will not cut the dividend; however, the company’s payout ratio is expected to increase year-over-year to 125 per cent by 2021. With current commodity prices, Vermilion will have insufficient cash flow to keep production flat, necessitating increased leverage to fund operations. If the dividend is cut without a strategic plan for the excess capital, it is likely that shareholder preference for Vermilion will be lost as it moves operationally and strategically in line with peers. However, with a framework of strategic assets in Europe, Vermilion is presented with an opportunity to re-diversify its asset base and transition back to its historical success.

**FORWARD YEAR EV/DACF MULTIPLE**

Vermilion’s Canadian production has some tailwinds that will assist in responding to the multiple compression. A promising catalyst is Liquified Natural Gas (LNG) Canada, an LNG-exporting joint venture backed by Shell, Petronas, Petrochina, Mitsubishi, and Korea Gas. LNG Canada is expected to transport up to 14 million tonnes of LNG per year to Pacific markets—this is equivalent to 350,000 barrels of oil per day of added demand, or about 20 per cent of current natural gas supply in Alberta. However, LNG Canada is not expected to be operational until 2023. Once in service, there will likely be a higher realized price as the currently oversupplied gas in Northwestern Alberta will have access to Asian markets after being converted to LNG. This scenario presents an attractive platform of increased cash flows for Vermilion to fund strategic expansion projects after 2023, but also suggests Vermilion should slow production growth in the meantime until LNG Canada is online.

**Burden or Benefit?**

While advantageous to re-diversify, shareholders will not reward production growth without a concrete strategic benefit. Vermilion’s untapped opportunity lies within the rising costs of energy in the Netherlands. On the supply side, the retirement of nearly 50 per cent of domestic natural gas supply has transitioned the country into a net importer. On the demand side, progressive global environmental regulations have prompted an expansion of the domestic natural gas industry at the port of Rotterdam.

**Domestic Supply**

In March 2018, the government of the Netherlands announced that production from the country’s largest gas field, Groningen, would be halted by 2030. Output from the field in 2018 was down 80 per cent from peak production in 2013 due to concerns that exploration and development had resulted in earthquakes. Declines in production have been compensated for with increases in Russian gas imports, nearing 243 million barrels of oil equivalent (MMBOE) since 2014. Given the rocky history between the Netherlands and Russia, importing Russian gas has been an unpopular decision among the Dutch people.

With the only other alternative being importing through more expensive LNG regasification facilities, the Dutch will need to turn to their smaller gas fields to ramp up production. There is precedent for this scenario in the Small Fields Policy introduced in 1974, which prioritized extraction of resources in small fields. This policy was enacted to remove uncertainty in demand and stimulate growth in small-field exploration. Without Groningen, the small fields will now be the lowest-cost source of energy for domestic supply and, since they are not concentrated to one area, pose minimal risk to seismic activity. These
small field resources will likely be deregulated further by the Dutch government as Groningen production is phased out.

In 2018, the share of gas revenues in state income fell to record lows making up less than one per cent of the Netherlands’ GDP. Although this may ease the transition away from natural gas production to renewable power, domestic supply today must be maximized to inhibit economic losses from higher import costs. As a producer in the Netherlands, increasing production in small natural gas fields also comes with its own challenges. Complex and time-consuming regulations to obtain permits, as well as increased negative sentiment, have created a barrier to utilizing these resources to their full potential. However, with the high costs of energy and essentially zero transportation costs, the rate of return is only expected to increase as time passes.

**DUTCH NATURAL GAS DEMAND AND SUPPLY**

![Chart showing Dutch natural gas demand and supply from 2009 to 2029]

**International Demand**

Environmental trends are pointing to an uptick in LNG demand. The maritime shipping industry currently represents about five per cent of total global oil consumption, but the International Maritime Organization (IMO) is looking to shift regulations towards a more environmentally friendly fuel source. IMO 2020 is a series of new regulations that mandates a global sulfur concentration cap of 0.5 per cent in shipper fuels from the previous cap of 3.5 per cent. In response to the new regulations, shipping tankers are presented with three options:

1. Continue using High Sulfur Fuel Oil (HSFO) but install expensive scrubbers that effectively ‘clean’ the sulfur emissions. Scrubbers can cost about $3 million to install per ship and projections have shown that only 5,000 of 50,000 ships globally will install scrubbers by FYE 2020.

2. Refuel with Low Sulfur Fuel Oil (LSFO) that emits less than the 0.5 per cent sulfur cap. The pitfall is that LSFO is more expensive than HSFO and has been found to emit the similar levels of non-sulfur greenhouse gases.

3. Use LNG. Environmentally, LNG is a friendly alternative to HSFO and other conventional fuels. LNG reduces sulfur oxide emissions by 85 to 90 per cent and carbon dioxide emissions by 15 to 29 per cent. To use LNG as a fuel, ships need to be renovated to hold the cooled gas and about 80 per cent more combustion volume is needed to achieve the equivalent power to a fuel oil. Even with these drawbacks, various studies have put the operating cost advantage from anywhere between 15 to 30 per cent or more, depending on the price differential between the two fuels.

The IMO has been applauded for its lofty 2050 goals targeting a 50 per cent reduction of current CO2 emissions. However, the International Energy Agency forecasts the IMO will only meet about 10 per cent of its goal based on current measures. IMO 2020 will be the first step of many if the IMO’s 174 member nations are to reach their goals, further accelerating LNG bunker demand. While scrubbers and LSFO are plausible alternatives today, tightening regulations are pushing these options aside.

The Netherlands is home to Rotterdam, the 11th largest shipping port in the world and the largest in Europe. The port is expected to be a market hub for ship-to-ship LNG trade, regasification into domestic markets, and LNG as a bunker fuel. The growth in overall LNG throughput is already being felt with a 37 per cent increase year-over-year in 2019. As a marine fuel, demand grew at approximately 210 per cent year-over-year and is expected to reach 1 million tonnes by 2025. This is an equivalent increase of approximately four per cent to current Dutch natural gas demand; however, this figure is arguably understated as the IMO needs to be more stringent to reach its goals. Whatever the added demand will be, this creates a constant bid for LNG at the port of Rotterdam, leading to higher energy prices in-land, and ultimately benefiting small-field producers.

**Growing the Premium**

The tandem of rising LNG demand and falling domestic supply will give rise to a cost burden on Dutch consumers, a headache for policymakers, and an opportunity for Vermilion. In 2011, residents of the Netherlands paid €0.0644 per KWh, 15 per cent more than the EU average. Today, they are paying €0.086 per KWh, 45 per cent higher than average. Increasing demand for natural gas and calls to reduce reliance on Russia will force Dutch regulators to increase LNG imports through Rotterdam. However,
rising use of LNG as bunker fuel will increase prices at the port, further increasing in-land prices. The optimal option for lawmakers is to reduce regulatory barriers to exploration and production of domestic small-field natural gas, benefitting producers like Vermilion. Initial activity should be driven by established producers with developed assets and geological expertise in the area. As the largest onshore small-field producer in the country, Vermilion is the easy choice to avoid an energy disaster.

**Action Plan**

Vermilion’s European gas operations are predominantly in the Netherlands and currently contribute nine per cent of corporate production. Vermilion is strategically positioned to leverage its current operations and headquarters in the Netherlands into a larger scale operation. If Vermilion were to double its production in the Netherlands by changing the allocation of its budget from Canada, the estimated share price appreciation would be approximately 50 per cent based on the EV/DACF multiple expanding and the added cash flow from additional Dutch production.

Given Vermilion’s nearly 100-per-cent debt-to-equity ratio, the company is not positioned to raise additional debt or equity to finance a high growth expansion. However, Vermilion can cut the dividend to fund higher return assets, namely the Netherlands. By lowering the dividend to a peer average five-per-cent dividend yield and decreasing the payout ratio from an estimated 110 per cent to 100 per cent, Vermilion could access roughly C$200M of additional capital through 2020. With a determined strategy of where to deploy this capital, the small multiple premium that Vermilion still maintains will not only hold after a dividend cut, but also expand with a strategic diversification strategy.

Vermilion’s cost of each incremental barrel of oil per day in the Netherlands is estimated to be $18,850. With an effective annual decline rate of only 8 per cent in the Netherlands, the C$200 million capital injection takes the expected 2019 production of 8,300BOE per day to 14,600BOE per day in 2020, and to 33,000BOE per day by 2023. Assuming Canadian production is held flat, by 2022 Canadian production will only represent 47 per cent of the company.

Assuming the historical multiple premium over industry of 2x is achieved by 2021, Vermilion should trade at a multiple of 6.9x and imply a share price of $29. This is a 56 per cent increase to the current share price and heavily reliant on regulatory success. Therefore, in the low case, it is assumed that Vermilion only achieves half of its estimated production growth as regulations are more stringent than expected. In this case, Vermilion is unable to diversify to the same extent, only receiving a multiple premium of 0.5x resulting in an expected 6.9x EV/DACF in 2021. This still is quite profitable for shareholders and does allow for the payout ratio to decrease below the 100 per cent threshold to an expected 87 per cent. In the worst-case scenario, it is assumed Netherlands regulators do not allow for any production expansion post-dividend cut. In this situation, Vermilion would push for further deregulation of Netherlands production or explore expansion opportunities in other European countries. By using the excess cash from the dividend cut to pay down debt, Vermilion will decrease its 3x leverage multiple and decrease its payout ratio below 80 per cent for 2020 with no expected downside other than losing the 15 per cent dividend yield.

**HIGH AND LOW CASE SCENARIOS**

**Conclusion**

Given the economics of further expansion into the Netherlands, it is apparent Vermilion must take action to re-diversify its global production base. Vermilion should free up cash flow and lower its payout ratio through cutting its dividend and use the excess cash flow to invest in the Netherlands. These small field Dutch assets have proven to be promising catalysts with IMO 2020 and further environmental regulations increasing demand. On the supply side, the elimination of Groningen production increases the need for small field exploration and production. In the longer term, Vermilion is positioned to capitalize on expansion initiatives with a solid asset base in Northwestern Alberta that will likely provide increasing cash flows as LNG Canada comes online. Overall, by eliminating the dividend to re-diversify its assets into the Netherlands, Vermilion will decrease its payout ratio to sustainable levels and increase shareholder value.
HAAS F1: THE FASTEST START-UP YOU’VE NEVER HEARD OF

Haas F1 can disrupt the world’s most expensive sport with a small budget by focusing on lean operations and strategic sponsorship partners

*Dylan Matthews & Jon Finless*
Formula 1 Racing (F1), the global pinnacle of motorsport, garners a global viewership in excess of 450 million annually. Every year, 20 drivers backed by 10 teams compete in a nine-month, 21 race-long competition around the world. At the heart of this competition is the Constructors’ Championship: the award given to the team ("constructor") with the most cumulative points across two drivers at the end of the season. Just two teams, Red Bull Racing and Mercedes AMG Motorsport, have won this trophy over the last decade.

The odds are stacked against new entrants to this sport. Four new teams have tried to enter and compete in F1 over the past decade; three have since folded. Engineering a car that can compete with incumbent teams with financial backing and experience is both very costly and technically difficult for new entrants.

Entering in 2016, Haas F1 is the sport’s first American constructor in over 30 years. Haas F1 took the racing world by storm when they scored more points in their debut race than the total points of all previous new constructors of the last decade combined. In 2018, Haas F1 finished fourth in the Constructors’ Championship in just their third season—a position dubbed “best of the rest” acknowledging the technical prowess of the sport’s three premier teams. Overnight, Haas F1 went from being a no-name constructor deemed to fail to a strong, credible midfield competitor.

With unprecedented early success, expectations for the team going into the 2019 season were high. However, 2019 proved to be Haas F1’s worst season yet. They finished second-last in the Constructors’ Championship and lost their title sponsor, calling into question the team’s future commitment and survival.

In a winner-take-all sport like F1, how can start-up teams like Haas succeed? In their pursuit of a sustainable competitive advantage, the team must treat F1 as a business rather than a sport. While they may fall short of the podium, Haas F1’s commitment to the sport will be profitable so long as they trade off the idea of winning races with a commitment to consistency to gain exposure and build their brand.

The Formula Behind Formula 1

As each team must develop a new car at the beginning of every season, F1 teams spend on average an annual budget of $312 million. When breaking down this budget, constructors sustain their race operations with both prize money and private sponsorships.

Within the prize money stream, there are two main categories of revenue. On one hand, Category 1—which amounted to $35 million in 2019—is a fixed base amount disbursed evenly amongst every team. On the other hand, Category 2 is allocated based on the previous season’s results. In 2019, first place team Ferrari earned just over $56 million while last place Williams earned just $15 million.

Finally, teams also receive bonus payments based on past successes in the Constructors’ Championships. In 2019, Ferrari alone received an additional $73 million in recognition of their status as a “Long-Standing Team.” Given that a team’s future financial success is in part driven by past success, payment structures overwhelmingly favour incumbents and help maintain barriers to entry. For teams like Haas F1 with no podium finish to their name, this dynamic creates pervasive financing constraints.
In addition to prize money, teams also rely extensively on external sponsorships. Private sponsors invest heavily in F1 teams to have their brand advertised on the car. F1 is a lucrative marketing opportunity, with an estimated average return on advertising of 130 per cent. Better-performing teams will attract more sponsors due to the associated awareness from their brand. For example, Mercedes F1 which won the last six Constructors’ Championships recently added the chemical group INEOS as a commercial sponsor for $26.2 million per year.

**Haas F1’s Innovative Approach**

Haas F1 was created by Haas Automation Inc. (Haas CNC), the largest computer numerical control (CNC) machine tooling company in North America. The team was born out of Haas CNC’s ambitions to gain market share in international markets, as well as owner Gene Haas’s personal passion for racing. In the realm of NASCAR racing, Gene Haas also has experience running a successful team bearing his name.

In light of rule changes in the Constructors’ Championship which allow teams to recycle parts from previous seasons, Haas has shifted towards cross-sourcing parts. Capitalizing on this favourable rule change, Haas F1 was able to source nearly every part they needed—such as the engine, gearbox, and suspension—from Ferrari F1. All of this enabled Haas F1 to avoid hefty research and development costs, while still having a competitive midfield car. While the car is not yet winning races, these sourced parts have helped Haas F1 build more consistent quality control and reduce uncertainty surrounding the range of race outcomes.

**The World’s Most Expensive Billboard**

F1 cars also act as marketing vehicles for team owners and sponsors. Haas CNC, the title sponsor and parent company to Haas F1 Racing, has used its F1 team to help promote its brand internationally. During their F1 team’s second season, Haas CNC recorded a 30-per-cent increase in unit sales, 55 per cent of which came from international markets. In Europe alone, the 41-per-cent revenue growth achieved was attributed in large part to the team competing in F1.

**Methodology for Determining Exposure**

In a capital-intensive sport like F1, one of the biggest challenges of any team is trying to measure their return on investment. One common measure of return on investment, the Advertising Value Equivalent (AVE) measures the difference between the advertising value a F1 team generates for sponsors against the costs of sponsorship. For Haas F1, success means prioritizing exposure above winning races. According to the Journal of Advertising Research, a team’s AVE varies based on several factors including their participation in a season, number of points, wins and the durability of a car—measured as the number of races a car can compete in before retirement.

**Results & Implications**

When comparing Haas’ 2018 and 2019 AVE based on their F1 performance, the AVE Benefit dramatically declined from $26.0 million to negative $23.3 million. This negative AVE indicates that the costs of advertising significantly outweigh its benefits. As such, even for its parent company, Haas F1 has ceased to be a desirable advertising medium.
On the current trajectory, Haas CNC’s AVE Benefit for the 2020 season follows a similar pattern to 2019. With similar results, Haas CNC would lose $36.3 million in their overall AVE contribution given the lower Category 2 funds and sponsors. On average, Haas CNC would be spending $1.78 for every dollar’s worth of advertising exposure.

***ANNUAL HAAS AVE NET BENEFIT***

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For Haas CNC to break even on their 2020 marketing investment, the F1 team should aim to finish with 55 points, or a sixth/seventh place finish in the Constructors’ Championship. This was calculated using a regression model assuming that Haas F1 has nine unfinished races in 2020—which is in line with historical averages—and does not win a race.

**Getting Haas Back on Track**

Ultimately, Haas F1 does not need to win races to be successful. In sport, success is defined as winning. However, in business, success can be measured more broadly in terms of return on investment and profitability. Haas should achieve its 55-point target by returning to a leaner operating model to ensure more consistent performance, as well as sacrifice some of its native branding in favour of bringing in both sponsors and strategic partners to help the team succeed and ultimately get more exposure.

**Lean Operations & Continuous Improvement**

The most critical error Haas F1 made in 2019 was their decision to increase its budget to $150 million. The additional investment was used to purchase and change more parts on the car than they had before, leading to greater variability. Even if the car was faster than before, the greater variability in car set-ups led to a car which consistently finished outside of the top 10 points-scoring positions.

Rather, Haas F1 should cap their budget at their present $150 million and focus on making only incremental changes to their cars, as they did in 2018. A 2015 Harvard Business Review article concluded that incremental changes to the car from season to season are more beneficial than drastic ones. While radical innovation may make the car faster, it also increases the variability in performance and results in more unfinished races. Furthermore, other successful constructors worked to first attract good car designers, then sourced parts to develop the car. The Haas F1 team should adopt a similar model to complement their lean operations. Since many new parts came from different sources in 2019, Haas F1 found it difficult to quickly diagnose technical problems. Haas F1 should adopt the design process from in-house manufacturers, first designing its car and then sourcing the appropriate parts, prioritizing small continuous improvements.

**Sponsors and Strategic Partners**

Big data drives today’s F1 cars. Every big F1 team has a data sponsor they partner with to model car performance: Renault F1 has Microsoft, Red Bull Racing has IBM, McLaren has Dell Technologies, and Mercedes F1 has SAP. As F1 regulations limit the amount of time a team can test their car on the track pre-season, established teams instead turn to data-driven simulations and wind tunnel modeling to design and tune their cars. Failing to do so puts Haas F1 at a disadvantage.

Haas F1 should consider partnering with data companies who can better use predictive analytics on car performance, aerospace companies who can apply their principles of aerodynamics on the car, and other companies who can better specialize on the technicalities of the sport. Haas F1 should orchestrate the overall strategy and design, leaving the technical developments to partners with greater resources to improve quality. For a mutually beneficial partnership, Haas F1 should provide its analytics partner advertising in exchange for data services.

**The Real Race**

Haas F1 started as a small but successful player, but deviation from their original business model has threatened the team’s continued participation in F1. By pursuing F1 as an advertising opportunity, Haas can minimize costs and optimize their returns instead of risking significant capital to compete against the F1 incumbents. Their strategy moving forward must return them to their core business model—consistency. For Haas F1, the real race is won in the exposure gained.