IVEY BUSINESS REVIEW

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THE IVEY HBA STUDENT BUSINESS STRATEGY MAGAZINE

Ivey Business Review is an undergraduate business strategy organization conceived, designed, and managed exclusively by students at the Ivey Business School, 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 exclusively 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 blog platform allows students and young alumni to further the IBR mission year-round.

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FROM THE EDITORS

Private Equity, Drones, and GMOs. An Editorial Board might be hard pressed to find more incendiary subject matter for IBR's spring issue. Yet, these topics hold not just controversy in common, but also the potential to help solve one of our most intractable challenges: African development.

"Manufactured Opportunities" explores how Uganda, Rwanda, and other East African nations could become global manufacturing hubs with the support of strategic, long-term private equity investors. Meanwhile, "Sky is the Limit" argues that drones could improve farm profitability in South Africa by tackling chronically low farming yields through effective monitoring for spoilage, more efficient chemical applications and improved allocation of labour. "Monsanto: Need for Seed" on the other hand explores how 2013's "Most Evil Corporation" could hedge against unfavourable Western regulations by investing in future growth regions, starting to effectively penetrate emerging African markets.

Ivey Business Review does not try to answer geopolitical or development issues, but we believe in the dynamism of industry and the democratizing effects of competition. But this doesn't stop at Africa, for revolution knows no borders. The spring issue addresses many globally disruptive forces including Bitcoin, mobile access to healthcare, and IPOing athletes for a share of their future earnings.

As we cast our eye critically on the shifting business landscape, we aspire to bring together the "thinking of tomorrow" with the opportunities of today. With minds unconstrained by years in industry and the power of a diverse team, IBR opens the floor to boundless solutions. "Tomorrow" doesn't need to be just new or more profitable, it can also be better.

The best things do not always come in the prettiest of boxes, nor the most expected of places.

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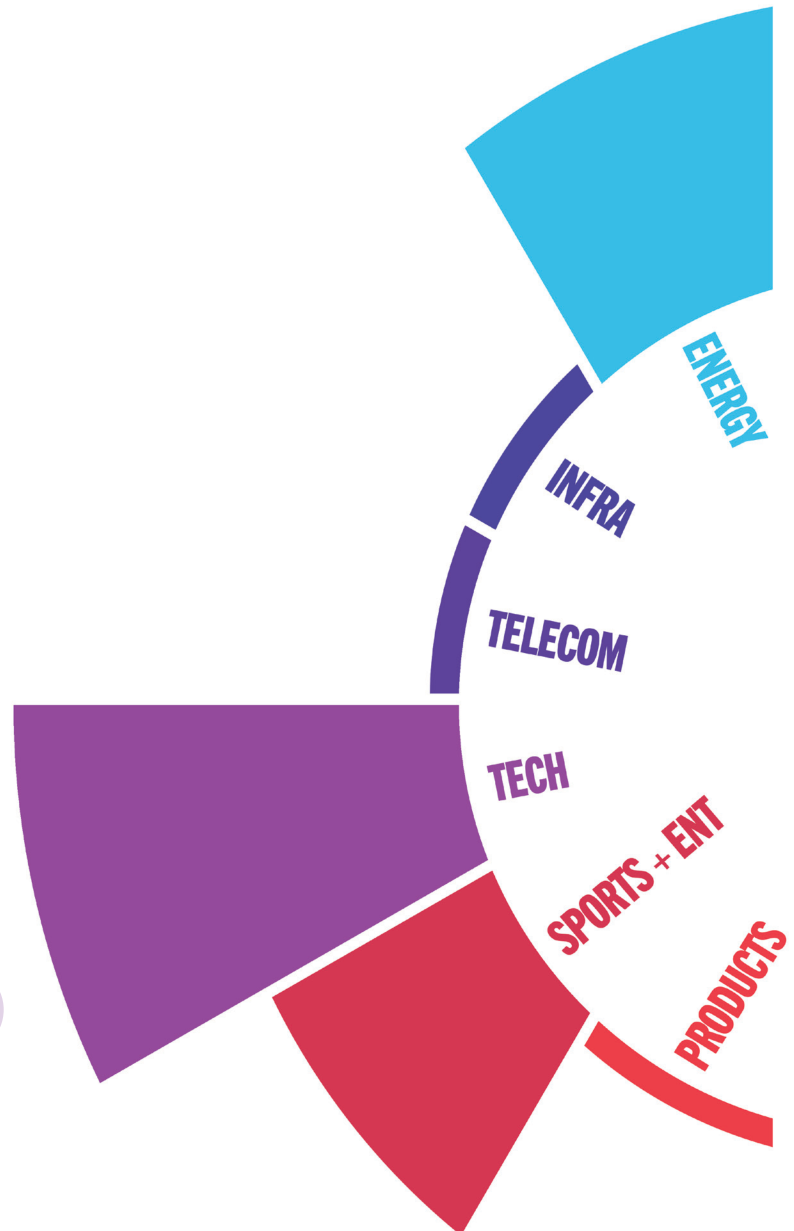

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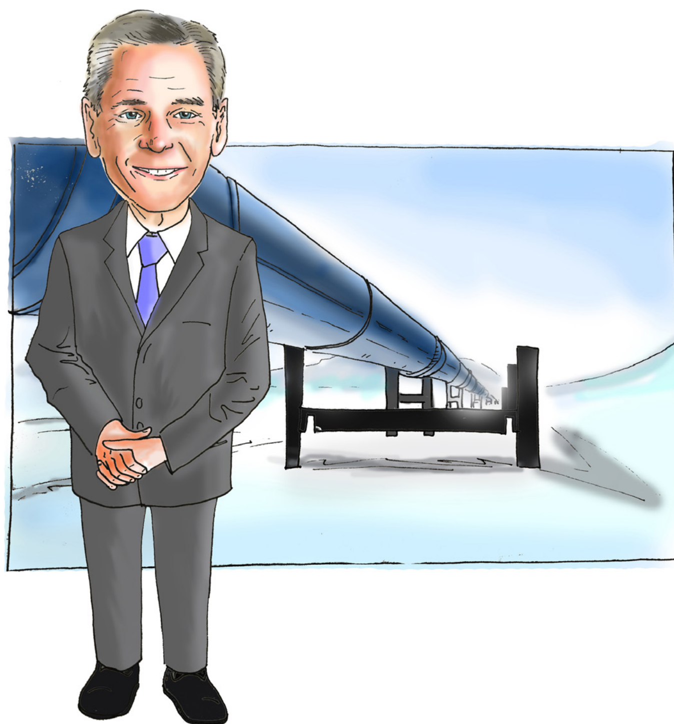
RUSS GIRLING

IBR talks with one of the most visible CEOs in Canadian Energy about his industry's transformational growth and the future of TransCanada



IBR: In spite of your troubles with Keystone XL, TransCanada's future has never been brighter. Fifteen years ago the story was much different.

RG: Yes, at the time there was a belief that the North American energy infrastructure industry was a sunset industry. TransCanada was generating significant free cash and needed avenues for growth, which forced us to look outside our conventional businesses and geographies. One way TransCanada sought to grow was through its merger with our competitor NOVA. Together we had an organization that appeared to have great promise, the largest Canadian corporate merger at the time. What we quickly realized was that the businesses (chemicals, international, etc.) that both companies had pursued for growth didn't hold the promise they were hoping for. Pro forma earnings per share (EPS) estimates post-merger were estimated to be in the range of $1.80 per share but turned out to be around $1.00 per share with the dividend pegged well in excess of earnings. That, combined with significant non-core capital investment meant more money was going out the door than we had coming in. This was not sustainable because the company was over levered, with roughly 74% debt.

IBR: In order to turn around TransCanada, you had to sell-off a lot of assets. How did you decide what was non-core?

RG: It was based on what we believed fit our A grade credit rating, which we were on the verge of losing. The strategy was more based on preserving our financial integrity and the long-term viability of our pipeline and power businesses, which were flowing cash and needed little future capital. There were other businesses, for example, our Mexican business, which fit our profile--long-term contracts, good cash flow--but we had to rank our preferences and make some difficult decisions. There were some good businesses that had to be sold even though they fit our model because we needed to pay down debt.

IBR: Why then did TransCanada, soon after this sell-off, move to commodity exposed merchant Alberta power, which is the opposite of credit friendly?

RG: It was somewhat opportunistically driven. The way I think we add value to our shareholders is by maximizing the spread between our return on capital and our cost of capital. We tend to operate at the low risk, lower return end of the spectrum so our cost of capital is low. Merchant power, while it appears to have higher returns, also comes with a significantly higher cost of capital. You have to ask yourself, for the increase in risk, are

Russ Girling
President & CEO, TransCanada

Since 2010, Russ Girling has served as the President and Chief Executive Officer of TransCanada Corporation, where he has overseen the investment of approximately $22 billion in North American energy infrastructure projects that are expected to come online within the next 3 years. Some of the projects Mr. Girling has been overseeing include Keystone XL, Gulf Coast Project, Energy East, Prince Rupert and Coastal GasLink Project. Prior to becoming CEO, Mr. Girling held the roles of Chief Operating Officer, Chief Financial Officer and President of TransCanada Gas Services.

Girling is currently a Director at Agrium Inc. and previously served as Chairman of the Interstate Natural Gas Association, TC PipeLines GP, Inc. and TransCanada Power L.P. and as Director at Canadian Energy Pipeline Association and Bruce Power Inc.

He is an alumnus of the University of Calgary's Bachelor of Commerce and Master of Business Administration (Finance) programs, was a member of Canada's Top 40 Under 40 1998/1999 class and was awarded the Haskayne School of Business Management Alumni Excellence Award in 2008.

About TransCanada

TransCanada Corporation is an energy infrastructure company with an enterprise value of C$ 60 billion and is one of the largest infrastructure companies in North America. Collectively TransCanada holds more than 70,000 km of oil and gas pipelines, and almost 12,000 MW of power generation facilities in Canada, the US, and Mexico.

you getting any increase in spread compared to keeping your risk low? In your portfolio, you can keep a small set of higher return, higher risk assets as long as it is small enough to not affect your cost of capital. Basically, you're able to fund your riskier business with your low cost of capital and capture a wider spread for your shareholders; just not so much that it increases your cost of capital. In the case of Alberta merchant power, the capital investment was low, coal fired generation was base load power in the province (lowering risk), and the earnings and cash flow potential were immediate which helped our cash credit metrics. Further, this small investment did not impact our cost of capital.

IBR: Given the importance of maintaining a strong credit profile, why hasn't there been a strong emphasis to diversify your pipeline business away from Western Canada, where most of your pipelines originate?

RG: There is strategic merit in diversification, but you have to have some competitive advantage that uniquely qualifies you to compete and win in those markets. If you don't have a base position you have to build one, or in mature areas acquire one. You have to find a base asset and pay a price that will generate acceptable returns going forward.

We did acquire ANR Pipelines, which was part of a strategy to give us exposure to a number of US basins including the US Gulf Coast. Interestingly though, I believe that owning long haul infrastructure, in a world where it appears that we have much more gas than we can ever consume on this continent, is a huge advantage. When the existing infrastructure is full, you have to build new infrastructure. The thing about new infrastructure in heavily populated areas is that if you can build it, it is going to be more expensive than old long haul infrastructure. Old fat pipe is the cheapest way to move gas to market, and producers are starting to see significant value in securing long haul transport on existing systems. Contracting from new shale basins onto pipes like ANR is going up. Where we traditionally thought we'd be moving gas from south to north, producers in the Northeast US are now saying they need to move gas north to south to access power and export markets in the southern US because they know that it's cheaper to sign up for existing infrastructure at our historic regulated rates than it is to sign up for a new pipeline.

"I BELIEVE THAT OWNING LONG HAUL INFRASTRUCTURE, IN A WORLD WHERE IT APPEARS THAT WE HAVE MUCH MORE GAS THAN WE CAN EVER CONSUME ON THIS CONTINENT, IS A HUGE ADVANTAGE."

IBR: How much does the lack of diversification come down to a capital allocation decision?

RG: The amount of diversification a company has is always a capital allocation decision. In our case we have to prioritize, to decide which opportunities are going to give us the most strategic value, and which ones are going to ensure that we don't compromise our core business. With our Alberta gas pipelines, for example, we've allocated significant capital towards protecting our system. We wanted to protect our competitive advantage in our most important market; so that opportunity would have a higher priority than opportunities to diversify into the Marcellus, for example. Back in the early 1990s the company didn't have the discipline to live within its own capital means, and often over-extended itself. In the pursuit of diversification, the company allocated its scarce capital in too many directions and in projects that took longer to transition from investment to cash flow than we had initially expected. We need to be careful not to repeat that situation by over allocating capital in too many directions. Today we have three attractive platforms for investment: gas pipelines, oil pipelines, and power. All three have more opportunity than our financial capacity. We need to remain disciplined in how we allocate capital and live within our means. If we do, I believe we can deliver significant shareholder value.

IBR: Why did you move back into oil with Keystone and Keystone XL so soon after selling your oil pipelines in the restructuring?

RG: This was driven by a fundamental view that the Canadian oil sands were growing and that there would be a need to move this product to market. At the same time, US Gulf Coast refiners were seeing their heavy oil supply declining from places like Venezuela and were looking to access Canadian heavy oil as a replacement. A pipeline between Alberta and the Gulf Coast with the ability to pick up US Bakken crude made tremendous

TRANS CANADA'S CURRENT CAPITAL PROJECTS

	PROJECT	CAPITAL COST (BN)	IN SERVICE DATE
OIL PIPELINES	KEYSTONE XL	$5.4+	2016?
	ENERGY EAST	$12.0	2017-2018
	OTHER OIL PIPELINES	$6.0	VARIOUS
GAS PIPELINES	ALBERTA PIPELINES	$2.7	VARIOUS
	MEXICO PIPELINES	$1.9	VARIOUS
	BC LNG PIPELINES	$9.0	2018+
POWER PLANTS	ONTARIO POWER	$1.5	VARIOUS
TOTAL		$38.5	

sense strategically. We knew that we were in the pipeline business, and we were good at it. We build pipelines. The regulatory process was something we understood. Linear infrastructure, land owner issues and aboriginal community issues were all things of which we had core competency. Further, the oil pipeline businesses had historically tended to yield greater returns than the gas pipeline business. This was a natural extension of our existing business.

In order to get the producing community and the refining customers to underpin such a project with long-term contracts, we needed something unique about our product offering. What we were able to offer up was about 1,800 km of pipe already in the ground, which we could convert from gas to oil service, making our project cheaper than the other alternatives in the marketplace. By doing this, we were able to position ourselves as a growing business and repurpose existing gas infrastructure which was experiencing declining throughput, a true win-win for our existing gas business and entry into a new business.

"THE NOISE AND RHETORIC FROM THOSE OPPOSED (TO KEYSTONE XL) CONTINUES TO GET LOUDER… I THINK THEY ARE MISINFORMED, THEY NEED BETTER INFORMATION, BUT WE ALSO NEED TO DO A BETTER JOB AS A COMPANY IN EXPLAINING OUR MESSAGE."

IBR: The opposition to Keystone XL is something that caught TransCanada off guard. How have you managed to navigate the opposition to this pipe?

RG: The fundamentals for supporting Keystone continue to improve. Today we are three quarters complete and are awaiting approval of the final phase, Keystone XL. At the same time, the noise and rhetoric from those opposed continues to get louder. It is clear their true opposition is not the pipe itself but what is in it, fossil fuels, and they would like them to stay in the ground. I think they are misinformed, they need better information, but we also need to do a better job as a company in explaining our message. The US consumes 15 million barrels of oil per day and imports 8-9 million barrels a day. Even with growth in US production and greater emission standards on vehicles, the US will continue to import crude oil for many decades to come. The safest and most reliable way to get that supply is via a pipeline from a reliable ally: Canada. These facts, along with the many jobs and economic stimulus created by Keystone XL, are the reasons that two thirds of the American public, majority of US Congress, trade associations, labour, Canadian government, and customers continue to support the project. Without their support the project would not have been able to endure the protracted and multiple delays. At the end of the day it is just a pipeline similar to the other 2.5 million miles of pipeline in the US today.

"PEOPLE KNOW THEY NEED ENERGY TO GO ABOUT THEIR DAILY LIVES, BUT THEY ALSO EXPECT IT TO NOT HARM THE ENVIRONMENT THEY LIVE IN, WHICH IS OUR EXPECTATION AS WELL."

IBR: How does TransCanada, which has risked its own capital on Keystone XL, work with the oil sands producers to help bring their product to market?

RG: We need to work with oil producers to ensure the public has the facts about oil sands production, the safety of pipelines, and what happens in the event of a spill. We need to communicate our collective commitment to ensuring the oil is produced, transported, and refined in the most environmentally sound and safe manner. People know they need energy to go about their daily lives, but they also expect it to not harm the environment they live in, which is our expectation as well.

With Keystone XL, we followed the historic process of filing our application with a regulator, expecting an 18 to 24 month turnaround on environmental review, obtaining our permits, and commencing construction, which obviously turned out to be a bit optimistic. We figured out what we have to do to keep public support on our side and that is going to the grassroots and building support for the project. By getting down to the grassroots and talking about the risks with communities we can understand their issues and reduce their anxieties. It is better to be the first to tell our story than to be on the defensive side responding to misinformation from project opponents.

With Energy East, TransCanada has spent time with over 500 communities listening to their concerns well in advance of filing an application about the risks, the mitigations, and the benefits. As a result, the dialogue on Energy East seems to have gotten off on the right foot, unlike the difficulties the industry has faced on projects like Keystone and Gateway.

IBR: Do you foresee similar difficulties with your gas pipelines to proposed Liquified Natural Gas (LNG) facilities on the BC coast especially with regards to fracking?

RG: No, in BC producers have been producing unconventional gas for some time now and it doesn't appear to have the same notoriety as it does in New York or New Brunswick. There are those opposed to fracking in Northeast BC, but I think there's a greater awareness of what the actual risks are because producers have been doing it for some time and the government regulation is in place to ensure it is done safely. I don't think the employment of fracking technology is an impediment, at least from what I'm seeing so far. Those aren't the kinds of questions we're being asked in the communities in BC. The primary questions are more with regards to, "What is the impact in my community going to be as a result of you traversing with this infrastructure? What input will the community have on how this infrastructure gets built and operated? And, what benefits can accrue to my community both in the short term and the long term?" In other places like New Brunswick producers are having difficulty, because fracking is not what people are familiar with. When people have sufficient knowledge, experience, and understanding of a particular form of resource development, they can get comfortable with the risks. For example, when you think about loading tankers on the coast of New Brunswick, it's done every day at Irving's facilities and there are minimal issues because people are aware of the safety protocols in place, the economic benefits it has, and the Irving's have a reputation for safe operation in the community. In BC this has become a large issue because it is new to those communities; there is a significant amount of education and consultation that will have to take place.

Currently, our LNG projects do not appear to be embroiled in the concerns about spills and I don't believe our project sponsors, Shell and its consortium or Progress Energy, are experiencing the same marine issues that proponents of the oil projects going to the West Coast are facing.

IBR: Over the long term where do you see TransCanada's focus: gas pipelines, oil pipelines, power, or something else altogether?

RG: We will continue to be opportunistic, choosing only the very best opportunities that arise in our three core businesses. That is one of the benefits of being diversified. People often have asked me: "Why haven't you moved power out on its own?" Our strategy is to take our free cash flow from our capital-intensive businesses and re-invest it in similar projects of similar risk. If we were only in one commodity, when good opportunities are not presenting themselves in that particular business we would be forced to step out on the risk curve. Each commodity operates on its own cycle. By having a diversified portfolio we can be more selective in the kinds of opportunities we invest in. My experience is if you set an arbitrary quota system on the things you invest in, you will be forced to make suboptimal decisions and destroy shareholder value.

Sometimes you just have to wait and be patient, which is something I've learned most about in this job; make sure you have a strong and diversified enough portfolio that you have the capacity to wait. When we first had the Keystone XL delay, and then the subsequent denial, our portfolio wasn't large enough because our shareholders were overly focused on what happens to Keystone. Today, having the larger ($38 billion) more diversified portfolio of investment opportunities we are pursuing reduces our exposure to any one project and allows us to be able to wait out long delays.

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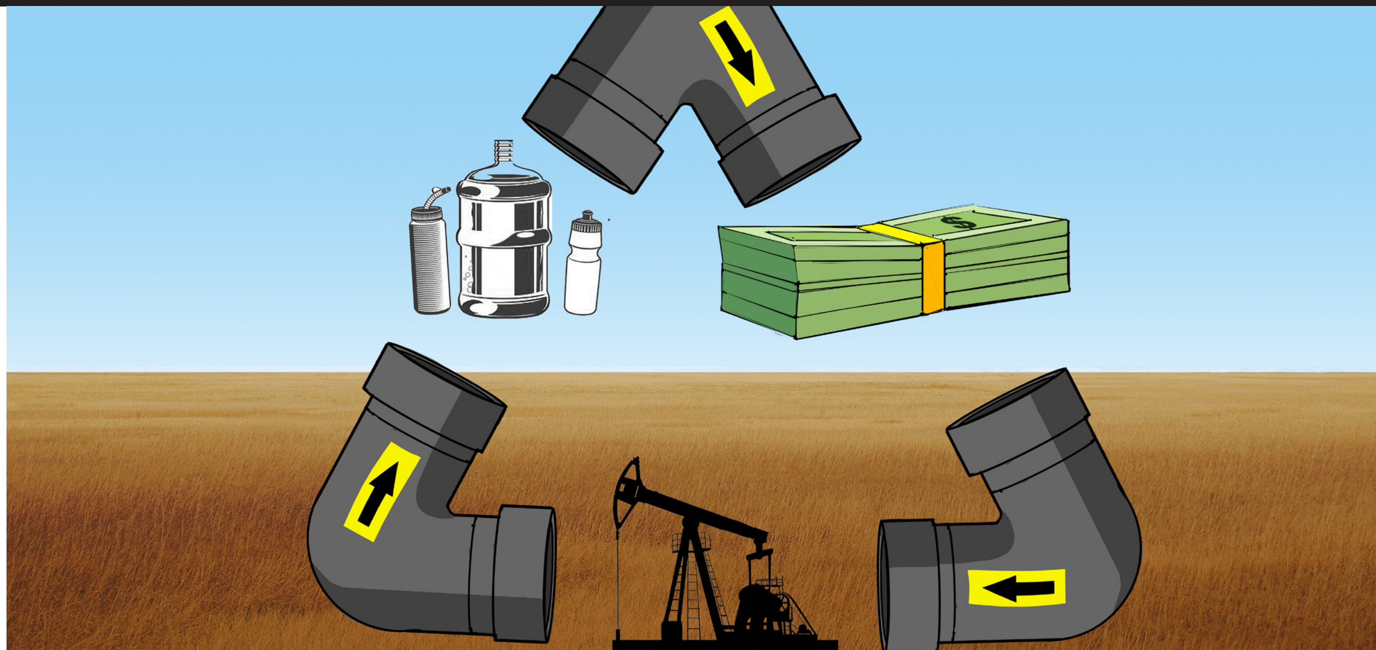


LIFE IN PLASTICS, IT'S FANTASTIC

Encana's play into plastics

By Brittany Girling & Tanuj Dutta

Encana Today

Since the fall of natural gas prices, pure natural gas producers like Encana have been struggling to achieve profitability and improve share prices. Encana has recently been producing gas at an average production cost of $4.37 per million Btu (MMBtu). With average prices currently at ~$4.50/MMBtu and prices expected to stay between $3.50 and $6.00 over the next few years, production should continue to be marginally profitable. As such, Encana has focused its investments on five core liquids and oil plays to increase margins and improve the profitability of its asset portfolio. While moving towards producing oil and natural gas liquids (NGLs), which contain hydrocarbon products such as ethane, helps improve short-term profitability, other diversification strategies such as expansion into the petrochemical industry would provide long-term profitability growth. This strategy would be a natural way to hedge the risk of volatile natural gas prices, while diversifying Encana's asset portfolio.

Stuck in the Pipe

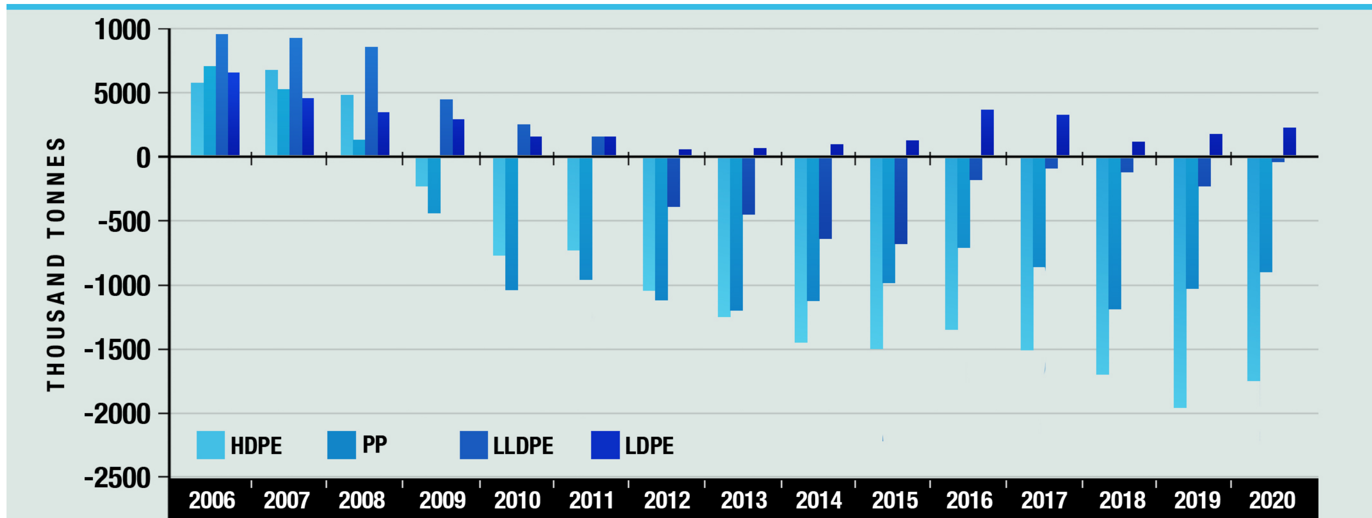
During the winter of 2012/2013, (natural) gas prices averaged $3.47/MMBtu in North America due to the abundance of resources made available from new technological advances in gas fracking. Since the supply of natural gas in North America is expected to remain significantly higher than demand, natural gas prices are expected to remain low. Prices for ethane in Alberta closely follow Alberta natural gas prices, which is why it is expected that ethane prices will remain low as well. With low ethane prices, many companies are finding it more profitable to "reject" ethane by leaving it in the natural gas or liquids stream, instead of selling it and transporting it separately. Although this results in marginal profitability, it is more profitable than any alternatives.

Ethane and Encana

North American companies that use natural gas and ethane as a feedstock (petrochemicals and fertilizers) have profited immensely over the past few years, as costs have remained low while revenues have stayed constant or increased. Since Encana plans on increasing its NGL production rapidly over the next few years, its ethane production will also increase rapidly. Although Encana's current strategy to increase NGL production will improve profitability in the short term, diversifying by moving downstream and using cheap ethane as a feedstock for plastics could turn a seemingly low value ethane stream into an immensely profitable one.

Positive Demand in Producing Plastics

Currently, 36% of the US plastics production is devoted to High Density Polyethylene (HDPE) and Low Density Polyethylene (LDPE), both of which are made using ethane. The global market for these products is projected to grow rapidly, with North America forecasted to be a major net exporter over the next six years. In particular, shipments of HDPE are set to increase dramatically, showing the potentially willing and able HDPE demand market.



Net Exports of Plastics for the US

Nexant Inc

Demand is projected to increase in many developing economies in Asia and South America. Specifically, most of the export growth for HDPE is expected to come from increasing demand from China, which is estimated to grow 8% annually from $14 billion in 2008 to $36 billion by 2020.

Petrochemical Production Process

Ethylene Expansion

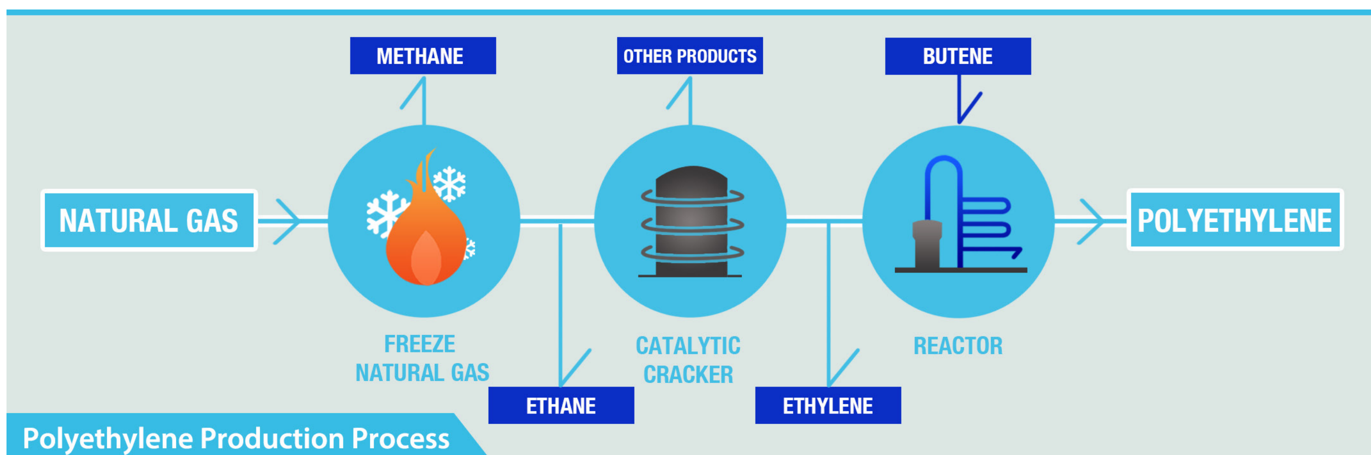
Both HDPE and LDPE are produced through the conversion of natural gas and other chemicals as seen in the process below. As Encana has excess ethane, the company should focus on building the later stages in the plastics production process. With most profits in the value chain coming from the final product, Encana should build a facility that converts ethane to ethylene. The ethylene can then easily be transported via rail to other facilities in Canada or the US Gulf Coast for processing into HDPE or LDPE. Considering that ethylene is required as feedstock to produce polyethylene, Encana can expect that the worldwide industry growth rates for both products will be similar.

Some Canadian and US petrochemical companies have already taken advantage of low natural gas and ethane prices by becoming more involved in the ethylene and polyethylene production process, which has significantly increased their profitability. In Canada, the majority of the facilities producing ethylene are large chemical companies, like Nova Chemicals and Dow Chemical. Both of these companies have spent significant capital to build large facilities that have the capacity to produce from 300,000 to 1.3 million tonnes of ethylene per year.

The Natural Advantage

Since ethane prices follow natural gas prices, it is assumed that ethane prices have dropped by 43%, in line with natural gas prices also dropping the same amount. These price changes have made it possible for Encana to hedge its own natural gas and ethane price exposure without the use of complex futures and option contracts. Currently, the ethylene gross margins are slightly over $1,000/tonne, which is significantly higher than the $300/tonne from 1990 to 2010.

The margins for plants that use ethane as a feedstock increased substantially from 2011 to 2012, while the margins for plants that use Naphtha in both Europe and Asia actually decreased



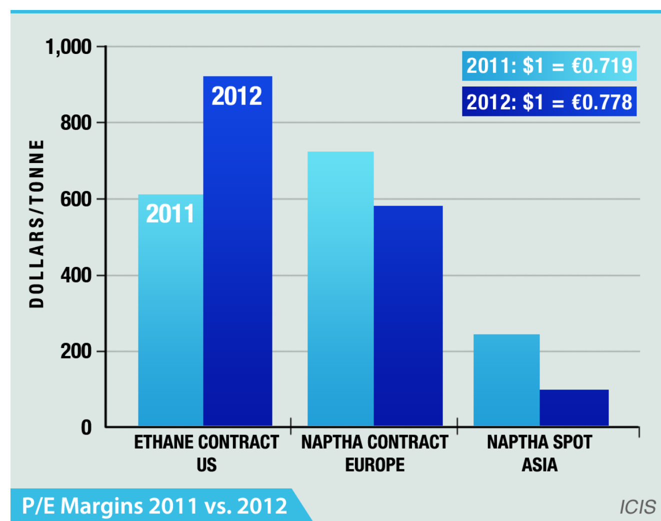
Polyethylene Production Process

over the same year as feedstock costs increased in those parts of the world. This justifies why many petrochemical companies are actually moving ethylene and polyethylene plants back to the US and Canada, and why Canadian players would have a competitive advantage through higher margins in producing ethylene over international players.

Potential from Plastics

Based on Encana's projected liquids growth for 2014, and assuming liquids production splits in the US and Canada remain similar, Encana is estimated to produce ~53,000 bbl/d of liquids from its Canadian plays, 14% or ~7,500 bbl/d of which will be ethane. Encana's planned growth rate for liquids production and ethane is estimated to be approximately 30% per year, potentially resulting in ~21,420 bbl/d of ethane production by the end of 2016. This volume of ethane would provide adequate feedstock to supply a petrochemical plant that produces ~270,000 tonnes per year of ethylene.

While purchasing a petrochemical plant would allow Encana to capitalize on the price differential quickly, there are only two major ethylene plants, owned by Nova Chemicals and Dow Chemical, and neither are likely sellers. The alternative is building a new facility.



P/E Margins 2011 vs. 2012

For Encana to build a plant that would convert ethane to ethylene with the capacity to produce 270,000 tonnes per year, it will cost approximately $1 billion, taking an estimated 4 years to design and build, based on estimates from plants currently being built in the US. With ethylene gross margins around $1000/tonne, this opportunity could represent an increase in gross margin of $270 million; a 9.2% increase over Encana's 2013 gross margin. This substantial increase clearly shows the ability for the petrochemical industry to increase the profitability of low value products like ethane.

While the upfront capital investment is large, the project will likely prove profitable, as feedstock prices are expected to remain low and the world demand for polyethylene and ethylene, is expected to grow rapidly over the next few years. Due to high margins in the business, the payback period would be approximately four years.

Petrochemicals Partnerships

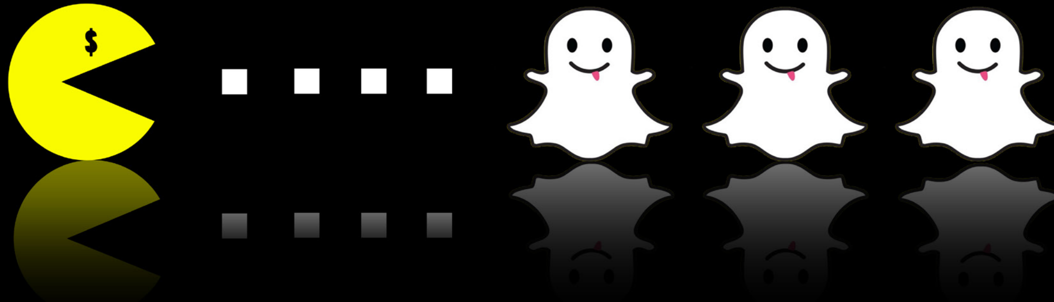
The main constraints preventing Encana from moving into the industry is a lack of short-term cash flows, low share price, large amounts of debt, and inexperience in the petrochemicals industry. Encana's current share price is low, relative to its pre 2010 value, at approximately $20 per share, limiting its ability to raise equity. The company has over $7 billion worth of debt, which is similar to Encana's historical debt levels; however, losses make it difficult to continue borrowing large sums of debt. Nonetheless, Encana has a large capital expenditure program and invested $3,476 million in 2012, indicating its ability to continue to fund exploration and development.

To finance and take advantage of the current opportunity in petrochemicals, Encana should expand its current joint venture with Phoenix, a subsidiary of PetroChina, in the Duvernay. PetroChina is a Chinese company with operations in oil and gas production, refined products and petrochemicals. Although PetroChina has the money and expertise to enter the ethylene market itself, current foreign investment rules regulated by the Investment Canada Act encourage companies like PetroChina to invest with local Canadian companies. Partnering with a foreign firm like PetroChina could provide Encana with the expertise and assistance in financing required to build a petrochemical facility.

Construction in Canada

The Alberta petrochemical industry is strong and competitive globally, due to ease of market access by rail and captive suppliers that can provide low cost feedstock. Alberta is an attractive business environment for petrochemical production because the business policy environment allows for better returns. Additionally, from a regulatory perspective, Alberta has one of the most progressive professional regulatory processes in North America for siting and certification of such facilities.

While diversification into petrochemicals differs from Encana's immediate goal of focusing on growth in oil and liquids, it adds another lever for long-term growth and provides a natural hedge against low natural gas prices. Moving downstream into petrochemicals does not require Encana to change its current strategy; it supplements it by significantly improving the profitability of its soon-to-be increasing ethane production. While this opportunity is not within Encana's core competency, and still exposes it to commodity risks similar to other operations, the expected growth in the ethylene industry globally provides an opportunity for companies like Encana to turn its ethane into a higher value product and increase its bottom line.



A GLIMPSE OF REALITY

The future of Snapchat in the quickly evolving messaging space

By Robby O'Brien

After Snapchat turned down a $3 billion acquisition offer from Facebook, pundits and tech-junkies alike scratched their heads over the news, while trying to piece together their thoughts on whether the offer was rational or ridiculous. A mere week later, as if on cue, the start-up announced that users were now receiving more than 400 million picture messages (snaps) per day.

Furthering the narrative, February 19, 2014 brought news of Facebook's successful acquisition of WhatsApp, the dominant conventional mobile messaging application (app) boasting more than 450 million active users, for $19 billion. Framed against the backdrop of Facebook's prior acquisition of Instagram, and its 30 million registered users for $1 billion in April 2012, a trend of 'ever larger' splashes in the start-up technology pool begins to form. With mobile establishing itself as an indisputably dominant force in today's world, the genius of Snapchat's decision to remain VC-backed gains clarity.

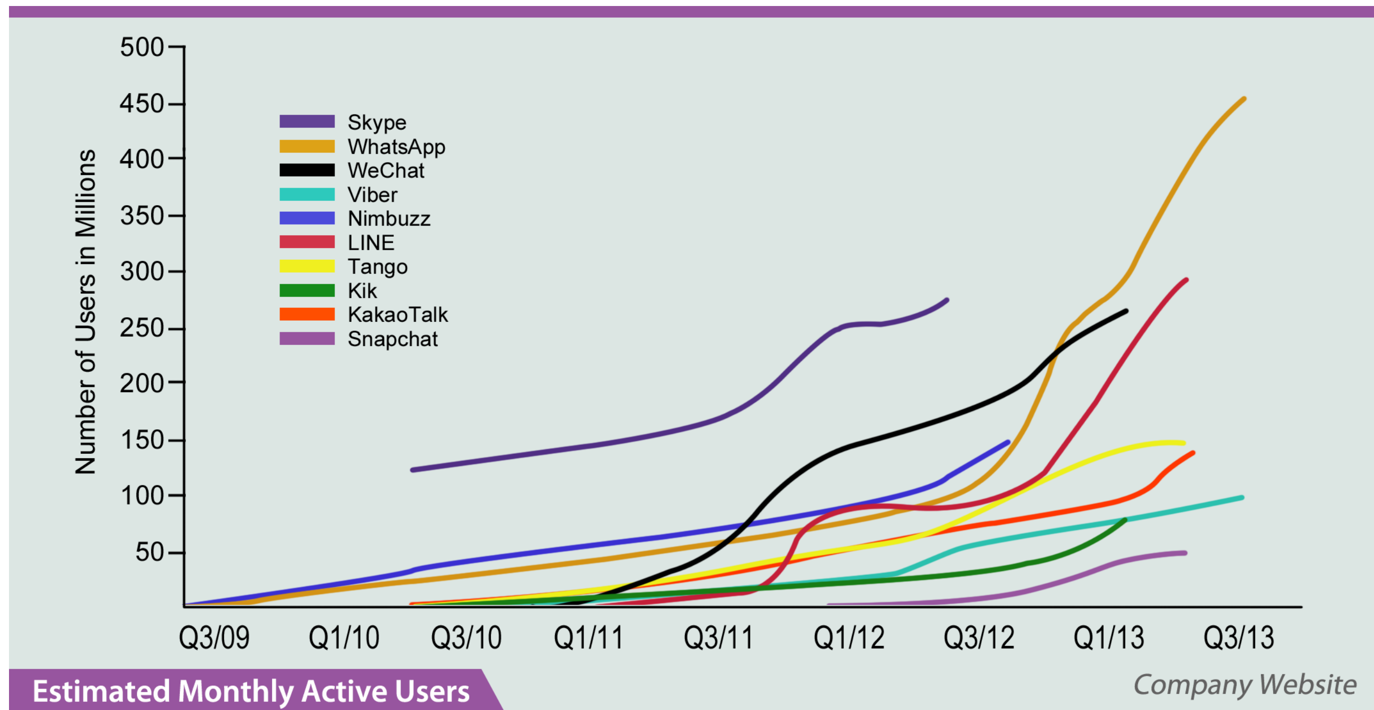
Framing the Picture

Run by two recent products of the Stanford billionaire machine, Evan Spiegel and Bobby Murphy are headquartered in a cozy office on Venice Beach, but Snapchat is not in a position to get comfortable. The company competes for smartphone users' time against countless other apps within the messaging niche. The global stage is dominated by 'the big five' mobile messaging apps: Skype, WhatsApp, WeChat, LINE, and KakaoTalk; all of whom, with the exception of KakaoTalk, claim over 250 million active users. With many more apps closely trailing these leaders, the space is undoubtedly crowded. Apps vie for space on smartphone screens by creating fast and simple user interfaces, and seeking a 'best in class' user experience. Additionally, messaging apps benefit from network effects, creating a 'winner takes all' scenario for the most popular apps within their respective dominant geographies.

Smartphone users are bombarded with options when it comes to messaging apps, resulting in redundancies when using several of them. But Snapchat provides value above and beyond the typical messaging app. It allows users to send pictures with optional overlay of text that are only viewable for a maximum of 10 seconds. The ephemeral (lasting for a short time) messaging space had no incumbents when launched in 2011. Snapchat has incredible potential in this sense seeing as it can exist simultaneously with other apps on a user's phone. The value offering and use case is inherently different. Perhaps Lightspeed Venture Partners' (LVP) Jeremy Liew explained Snapchat's core value offering best when he said, "It allows people to revert back to a time when they never had to worry about self-censorship."

Adjusting the Lens

The fact that Snapchat has yet to earn a cent in revenue appears to be a concern to many who question how this start-up could be worth three times what Instagram was worth to Facebook. It would seem that the company needs to pull up their socks and start generating some cash. However with global mobile ad spending set to increase significantly from $25 billion this year to almost $50 billion in just two years, revenue generation should be delayed in favour of maintaining the current user base growth. With a larger user base, Snapchat will be poised to capture a meaningful share of the projected mobile ad spending.



Estimated Monthly Active Users

Company Website

Currently, the average user of the app is speculated to be in the range of 13 to 24 years old. With the phenomenon of technologies, demographics tend to 'hop' from children to their parents, skipping the late 20 and 30-somethings. The next user base of the app may be Generation X. What's more, examining the growth trends for other popular messaging apps, it seems that Snapchat is approaching an inflection point at the 100 million user mark.

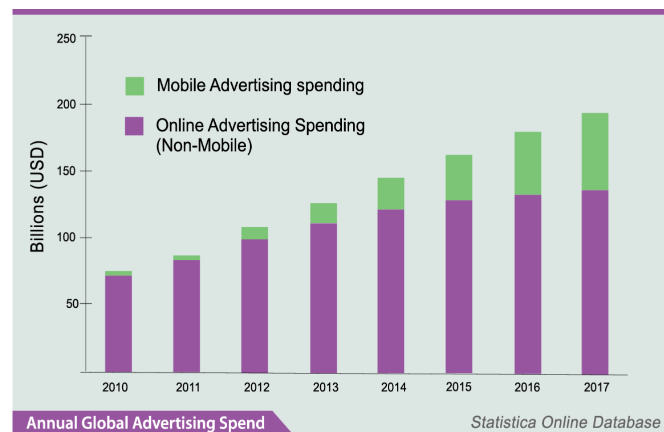
The dominant mobile messaging apps are proving the viability of revenue generating functionality ranging from dreaded subscription fees and advertising, to in-app purchases and buyable in-message images or 'stickers'. However, the revenue potential for Snapchat on the horizon is far greater than today. Snapchat is clearly growing its user base quickly, and should continue to make growth and high user engagement as its top priorities. Rushing the pursuit of revenue in the short term would be a serious mistake as it could limit future earning potential by alienating users or slowing the growth trajectory. Snapchat needs to develop its capabilities for engaging with advertisers today, so that when the app reaches a mainstream user base, tomorrow, it can capitalize to the fullest.

"THE FACT THAT SNAPCHAT HAS YET TO EARN A CENT IN REVENUE APPEARS TO BE A CONCERN TO MANY WHO QUESTION HOW THIS START-UP COULD BE WORTH THREE TIMES WHAT INSTAGRAM WAS WORTH TO FACEBOOK."

The 10 second photo shoot

Forward-thinking companies have already begun to try their hand at Snapchat marketing. McDonalds and Tacobell have invited Twitter followers to add them as friends on Snapchat. New York-based frozen yogurt company 16 Handles offered followers an 'exploding coupon' for their next purchase (within a snap), in exchange for sending a snap of them consuming a 16 Handles product. This is incredible for advertisers – a highly captive audience that has chosen to engage with the company for product offerings. When they decide to pursue a monetization strategy, Snapchat should develop app functions that allow marketers to more effectively engage with consumers.

Snapchat should provide functionality for company lookup within the app similar to the 'Find Friends' lookup function, but through a database of companies with Snapchat accounts. Also, Snapchat should offer verification and audit services for any marketers wishing to identify themselves as representing a company, including the ability to track, choose, and limit snaps sent by companies to protect the experience. This would create



Annual Global Advertising Spend

Statistica Online Database

value for both corporate marketers and regular users; marketers would benefit from a protected corporate brand and users would benefit from a controlled and audited advertising process. Snapchat maintains control over user experience and creates an opportunity for future revenue generation by stimulating relationships with other companies. Best of all, since it simply facilitates the connection of advertisers with users instead of forcing it, it's unlikely to curb the growth rate.

Beta Testing Opportunity

Though barely publicized, Snapchat has taken advantage of the opportunity to test a range of functions available for future revenue generation, from 'Find Friends' to 'Stories,' with very low risk of user alienation. The company has admitted that new functions are alpha tested with a small fraction of the user base before wider implementation across the app. The captive audience of Snapchat is thus another avenue of incredible potential – the current app user base is available as a team of dedicated beta testers. When functions like 'Stories' go app-wide, they can essentially be beta-tested for future use with marketers; if functions don't measure up with the alpha-testing they can be taken back to the 'drawing board.'

There is tremendous potential in the opportunity to ensure that new functions fit well with the general user base before ever being offered as a source of revenue generation. Functionality, which proves successful with a limited alpha testing user base can similarly be implemented across the app for further testing before offered to marketers.

For example, the traditional sticker functionality, used by some other messaging apps, could offer a limited number of images to place on top of photos taken with the app. If a variation of the function proves successful with the general user base, in the future marketers could be offered 'sticker sponsorship.' If a user chooses to receive snaps from a particular company, the company can then pay to have more, different, or branded 'stickers' available to the user for use.

"BY FOCUSING ON GROWTH TO REACH MASS MARKET ADOPTION, AND PURSUING NEW APP FUNCTIONALITY TO ATTRACT MARKETERS, SNAPCHAT WILL POSITION ITSELF TO CAPTURE THE EXCEPTIONAL MARKETING SPEND IN THE FUTURE."

"WITH PROFITS IN THE FUTURE LIKELY TO BE SIGNIFICANT, VALUATIONS COULD EVEN EXCEED $20 BILLION IN TWO YEARS."

Capturing the Value

By focusing on growth to reach mass market adoption, and pursuing new app functionality to attract marketers, Snapchat will position itself to capture the exceptional marketing spend in the future. But how much can Snapchat really earn?

Snapchat would likely be able to charge high-end marketing dollars to reflect high user engagement. This would then mirror higher prices, such as those for Twitter's cost per user engagement on promoted tweets ($0.75 to $2.50), or Facebook's cost per click on promoted ads ($0.60 in the US). Therefore, an advertiser might find it reasonable to pay between $0.50 and $1.00 for each user impression (opened) snap on Snapchat. If the 100 million users received 10 to 20 promoted snaps per year this would represent 1 to 2 billion total ad impressions. As a point of reference the average user receives 1460 snaps per year, meaning advertisements would comprise a reasonable, approximate1% of received snaps. To further justify strong user engagement, a recent study found that almost half of college-aged users would open a snap from an unknown brand and 73% would from a brand they knew. This could generate between $500 million and $2 billion in revenues representing between 1 to 4% of the $50 billion in global mobile ad spending expected in 2016.

So what does that mean for the valuation of Snapchat? Most tech IPOs for internet services fall between 2.8x and 50.0x with a mean of 13.2x. Twitter for example IPO'd at 26.0x its 2014 revenue estimates. Considering the hype around Snapchat and its greater engagement capabilities, Snapchat's valuation could easily land on the higher end of this range. With revenues of $1 billion in a two year timeframe, Snapchat could see a valuation of $20 billion. It seems then that turning down the $3 billion acquisition for Snapchat makes perfect sense. With profits in the future likely to be significant, valuations could even exceed $20 billion in two years. However, Snapchat will need a clear and deliberate focus on maintaining the user experience to have any chance of capturing that value in the future.

A STATE OF SURVEILLANCE

How a move into services can bring Avigilon continuous cash flows

By Ryan Decaire & David Luder

Founded in 2004, Avigilon has become a leader in the design, manufacturing, and marketing of high definition, high megapixel network-based video surveillance systems and equipment for the global security market. Headquartered Vancouver, this young Canadian technology player is uniquely positioned as the only company that offers both software and hardware for the global security space. The components of the Avigilon system can be sold together or separately to provide customers with the only customizable end-to-end security equipment and monitoring solution. Since its first full year of sales in 2008, revenues have grown at an impressive CAGR of 100%. These growth figures are dominant in the security space, and a token to both the enormous market potential and Avigilon's effective company leadership.

With Canadian investors aiming to diversify away from the underperforming natural resource stocks that dominate the Toronto Stock Exchange, ample capital has been flowing into historically untraditional sectors including technology. Within this space, Avigilon's rapid growth has caught the eyes of investors. Avigilon is poised to become one of the few Canadian technology companies that dominate their market on the global stage. With rapid growth in product sales that are in line with the expanding surveillance and security industry, investors have pushed the stock price up almost 185% over the past year.

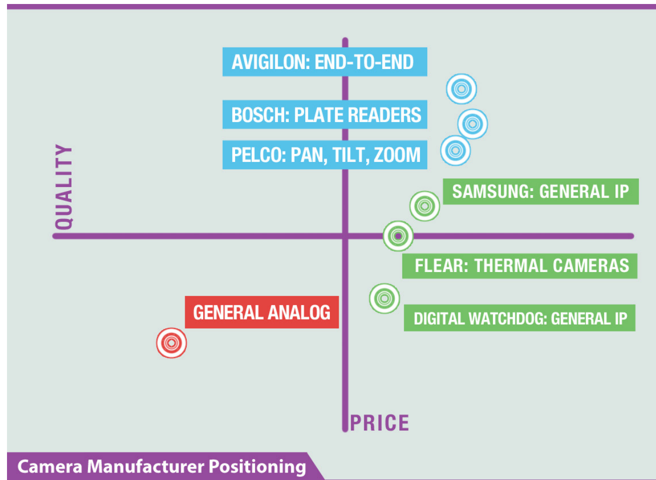
The Growing Surveillance Industry

Valued at $12.6 billion globally in 2012 and projected to grow to $23.3 billion by 2016, the global security and surveillance market is expanding rapidly. Major catalysts for growth include the development and spread of new high definition digital (IP) surveillance systems and an increased focus among businesses and consumers surrounding asset protection and theft prevention. The market is also highly fragmented; no player holds more than 6% market share, and the top 15 players represent 43.5% of the market. This fragmentation has allowed Avigilon to quickly capture market share while creating a window of opportunity for further expansion, as the company continues to assert its dominance with its technology and product offerings.

"AVIGILON IS POISED TO BECOME ONE OF THE FEW CANADIAN TECHNOLOGY COMPANIES THAT DOMINATE THEIR MARKET ON THE GLOBAL STAGE[…] INVESTORS HAVE PUSHED THE STOCK PRICE UP ALMOST 185% OVER THE PAST YEAR."

Spy vs. Spy

While Avigilon's growth has been strong and consistent, the long-term sustainability of its current sales strategy raises some concerns. First, with relatively low barriers to entry and with R&D spending being a key determinant of success, some industry experts believe that deep-pocketed competitors like Axis, Bosch, Milestone or Genetech will eventually be able to match



Camera Manufacturer Positioning

Avigilon's quality products and have the ability to offer lower prices due to economies of scale. There is also the risk of Avigilon losing existing customers to competitors who would be able to implement their systems on top of the existing Avigilon infrastructure. The industry shift toward an open platform, where new systems would be built on top of legacy systems, could pose a serious threat to Avigilon. Additionally, the majority of Avigilon's sales are conducted through intermediaries, called integrators, who lack concrete loyalty and are primarily concerned with pushing the best available product, regardless of the manufacturer.

Selling its products through an integrator also eliminates touch points between Avigilon and the customer throughout the ownership cycle, decreasing the opportunity to develop customer loyalty. Avigilon's current model is a one-time equipment and software sale business. Customers purchase Avigilon products through their integrator of choice, who then takes on product installation and educates the customer. This sales cycle can be long, taking up to 36 months. The risk of larger entrants, competitors building on top of their infrastructure, and the eventual saturation of low replacement rate one-time sales could lead to slowing top-line growth. In order to truly become a stalwart in the security industry, Avigilon must develop a recurring revenue component to augment its existing one-time revenue stream.

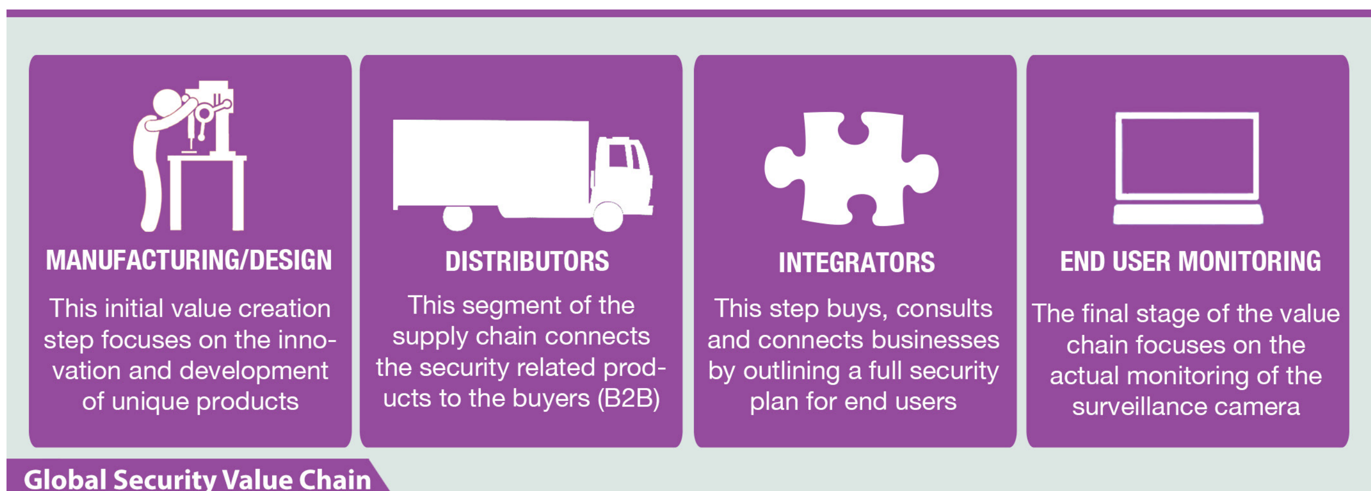
The Future of Surveillance

Currently, Avigilon is the only company that offers an end-to-end security system solution. The last part of the value chain that Avigilon does not control is the actual monitoring of the cameras. With the advent of IP security technology, surveillance monitoring has become a lucrative and rapidly growing industry with a small number of early entrants. Given Avigilon's large network of integrators and its control of the value chain, the company has an opportunity to leverage its existing business and develop a recurring revenue stream by entering the surveillance monitoring market. It is estimated that it would require an investment of roughly $35 to $45 million dollars to develop a monitoring business with $10 million of revenue. Due to Avigilon's lack of knowledge in this sector, Avigilon should enter the surveillance monitoring business by acquiring an incumbent who could bring the required knowledge of the monitoring space.

Monitoring the Opportunity

The advent of IP security not only made Avigilon's IP security equipment both a viable and unique business but also created the remote surveillance-monitoring segment. As high-quality surveillance footage can now be transmitted digitally over the internet, observers can monitor cameras that are physically located anywhere in the world from a central monitoring station. Players have entered this space by purchasing cameras through distributors, consulting to customers who require surveillance services, installing cameras and video management software, and then monitoring these cameras. Given Avigilon's recent expansion into international markets, the global capabilities of digital surveillance and IP camera monitoring will further allow the company to penetrate international markets in the form of a new service offering allowing increased monetization of customers.

The monitoring business, while in its infancy, is a highly lucrative segment of the security market that is growing rapidly with gross margins in the range of 60 to 70%. In general, monitoring



Global Security Value Chain

centre surveillance can shave approximately 50% off the cost of physical guards and often provides higher quality monitoring in comparison to human observers. This alternative model offers a powerful value proposition to end-users.

Those who operate as pure play monitoring service businesses tend to incur annual capital expenditures that equate to 8.5 times recurring monthly revenue. Hardware providers like Avigilon provide equipment to the pure play monitoring businesses, therefore it can be assumed that Avigilon would incur lower capital costs than potential competitors as it has control earlier in the value chain. Through vertical integration, Avigilon could reasonably incur capital expenditures of only 6.5 to 7.5 times recurring monthly revenue and, therefore, would enjoy more attractive cash flows than existing players as a result.

A key success factor of this business is scale; one operator can monitor approximately 200 cameras or more at any given time. A monitoring service business becomes more efficient if it can minimize false alarms, which must be investigated by an operator. Reducing the amount of time that operators spend investigating false alarms increases margins through greater capacity utilization. Avigilon's most recent acquisition of Video IQ plays directly into this dynamic. Video IQ is a leader in the development of video analytics, allowing monitoring service providers to focus on true events and avoid false alarms. With the technology and talent of Video IQ in hand, Avigilon's technological base is currently primed to create a competitive advantage that will allow it to be successful in the monitoring space.

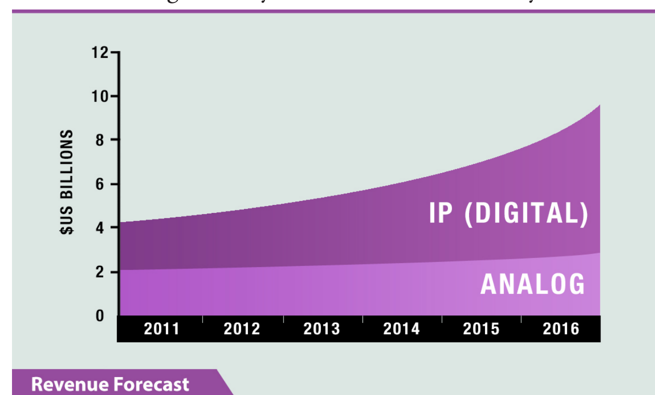
Selling Service

With an entrance into the monitoring space, there is an additional opportunity to further involve the customer with Avigilon product sales. By adopting an equipment leasing model, Avigilon could offer an all-encompassing payment system including both the initial product purchase and the ensuing monitoring services.

"WITH AN ENTRANCE INTO THE MONITORING SPACE, THERE IS AN OPPORTUNITY TO FURTHER INVOLVE THE CUSTOMER WITH AVIGILON PRODUCT SALES."

In this proposed financing model, Avigilon would produce the cameras and equipment required for an end user's site. The user would then make a monthly payment to Avigilon directly or through Avigilon's integrator channel partner. Every 24 months, Avigilon would renegotiate the equipment agreement with the customer, retrieve the existing equipment and replace it with newly developed equipment. Avigilon would then resell the used equipment in the active used camera and equipment market. By the time the equipment is sold to this market, Avigilon will have already recovered the full value of the product plus a healthy profit above the manufacturing cost. This indicates that all proceeds will represent incremental profit.

Reducing the capital expenditure required to install an Avigilon camera system will be attractive to new monitoring customers in both the SME market and among enterprise clients. In addition, the surveillance and monitoring model has traditionally been a recurring monthly revenue business whereby the customer makes a monthly payment for the monitoring provider's services. By offering customers of their monitoring service business the opportunity to make monthly payments for both the cameras and service, Avigilon would enter the market with a straightforward and comprehendible payment system.

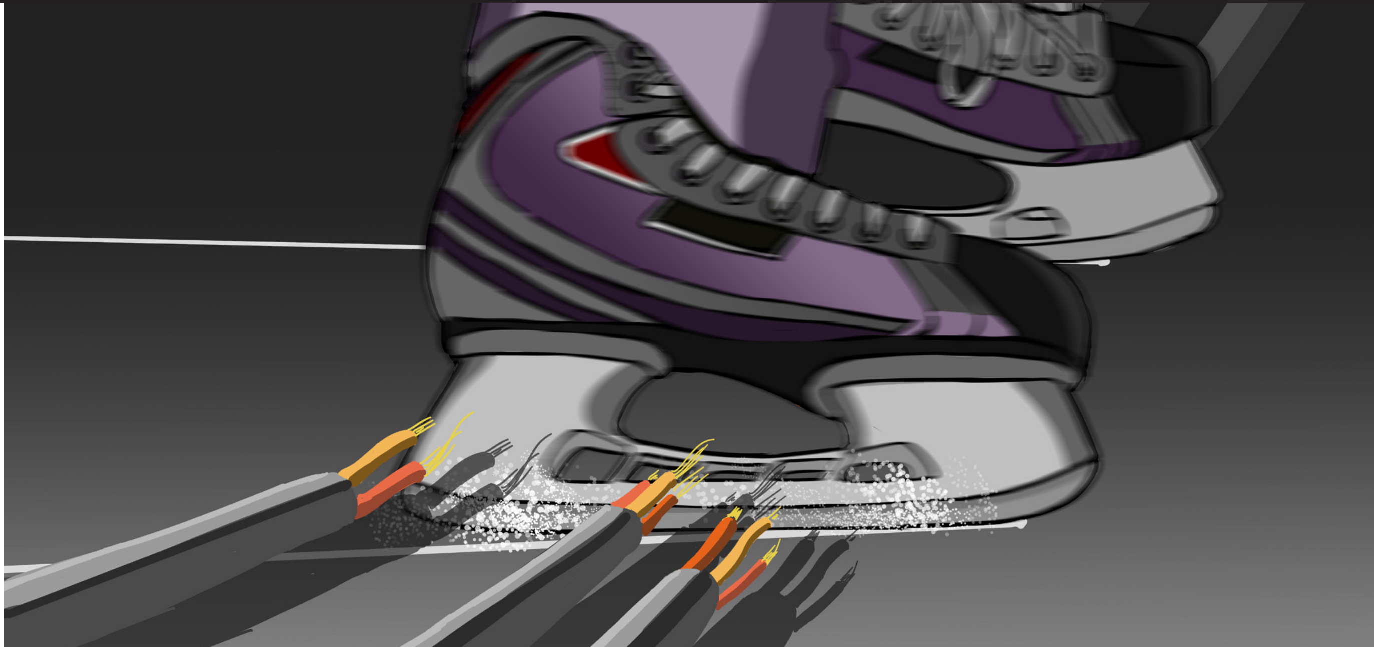


Revenue Forecast

Analyzing the economics of the business model, Avigilon could earn an implied interest rate of 12% per annum on the lease of the equipment while maintaining the present value cost to the customer. This is based on a customer's average spending on equipment of $14,000, providing Avigilon with a greater net present value of cash flows over a ten year period than it could earn under its current one-time sales model. Although this method of sales would be a drastic shift from Avigilon's current program, it would ultimately be a win for the customer with lower capital expenditures, a win for Avigilon with improved present value of cash flow, and a win for the new monitoring business as this new fee structure will attract customers that formerly would have feared the excessive cost of installing a surveillance system.

Keep Watching

Embroiled in the heat of the rapidly expanding security and surveillance industry, Avigilon must be prepared to adapt in order to maintain relevance and the long-term sustainability of its customer base. Acquiring a company to enter into the surveillance monitoring space would create the desired recurring revenue stream that Avigilon needs to complement its existing one-time sales model, especially as competition continues to improve its capabilities and threatens a lower total cost of ownership to the end user. Under the proposed model, Avigilon will grasp the remaining segment of the value chain and solidify itself as Canada's most influential tech giant.



MAKING THE CUT

How Rogers can elevate its legacy cable business to television of the future

By Joshua D'Souza & Michael Delplavignano

More than Just a Hockey Deal

On November 26th, 2013, the Canadian hockey landscape experienced a colossal shift as Rogers Communications acquired the rights to broadcast all NHL games on its television networks as well as operate NHL GameCenter Live, the NHL's online distribution platform, for the next 12 years. The move pulls the rug out from under its fierce rival, Bell Canada Enterprises, which is left with only a small number of regional NHL games to air on its networks. Rogers will shell out a whopping $5.2 billion over the life of the agreement, a figure almost six times the value of the NHL's three current contracts with Rogers' competitors: Bell and CBC. In an industry marred by intense regulation and fierce competition, telecommunications giants like Rogers have no choice but to continually pay a premium for live content in order to preserve the relevance of its legacy cable television business, despite declining revenues and increased adoption of cord-cutting.

As the cost of acquiring live content continues to skyrocket and cable television monetizing opportunities run dry, a more fundamental strategic question arises: is it finally time for Rogers to cut the cord on its cable television business?

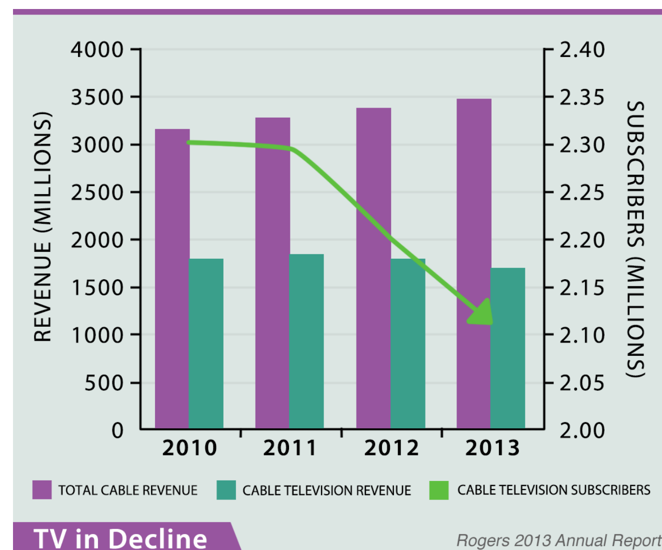
Cable Television Falls Behind

Cable currently comprises a substantial 27% of Rogers' total revenue, and is derived from internet, telephone and television services. Cable segment revenue has been expanding at a rate of 5% since 2010, with much of the growth attributed to increases in internet and telephone subscribers. The laggard of the bunch is cable television, which accounts for 14% of Rogers' total revenue and is comprised of 2.2 million subscribers, a figure that is falling precipitously. Over the past four years, Rogers has watched 178,000 cable television subscribers leave its service, resulting in cable television revenue declining by 4% over the period. The loss of these subscribers also resulted in decreased viewership, which adversely affected advertising revenues. Although Rogers generates considerable average revenue per user (ARPU) of $70 per month through its cable television subscriptions, customer erosion poses a significant risk to the sustainability of its business. Furthermore, cable subscriptions have the largest ARPU with the highest operating margin (49.7%) of any of Rogers' business units, making each drop in this segment significant to the bottom line.

Out with the Old, in with the New

Over the past 20 years the television industry has seen operating margins shift from upwards of 70% to a present day 35% due to rising content costs and increased competition from both direct competitors and alternative providers. Continued margin erosion appears to be inevitable as 16% of current cable subscribers report that they anticipate cancelling their cable subscription in the next year. Since cable television operates largely at a fixed cost, a reduction in subscribers will directly result in a lower overall profit margin. This segment of deserters is known as cord-cutters, consumers who have canceled or anticipate canceling their service. Cord-nevers, individuals who will never subscribe to cable television and represent approximately 3% of the Canadian population, are also accelerating the growth of this segment. These two groups (trend setters) are younger, more

tech savvy and focused on consuming content in three categories: TV shows, movies and live sports.



TV in Decline *Rogers 2013 Annual Report*

Traditional cable television subscribers (traditionals) vary from trendsetters in their watching and access behaviour. Trendsetters target exactly what content they would like to watch, accessing it most commonly through their computer or gaming devices. Contrary to trend setters, traditionals value turning on their television set and having ready to watch programming aired in sequential order, instilling a more habitual schedule.

For sports, trend setters have the same watching behaviour as traditionals, but the two groups differ in their willingness to pay. Trend setters are not interested in the abundance of channels offered by traditional cable subscriptions and cannot justify high prices for access to sports (the only content they cannot currently legally access online).

To combat these consumer tendencies, cable providers are trying to keep customers engaged so they can continue to monetize their viewership. One avenue is through differentiation of their content offerings by focusing further upstream in the value chain, highlighted by Rogers' acquisition of exclusive rights to live NHL games and joint acquisition of Maple Leaf Sports and Entertainment with rival Bell in 2013. Having control of live sports content is imperative in the world of television; however it comes at a steep cost as live sports content prices are anticipated to grow by a compound annual growth rate (CAGR) of approximately 8% over the next five years. A combination of increasing content acquisition costs and a decline in consumers' willingness to pay for cable television (70% of consumers' number one complaint about cable television is its cost) signals that a reliance on the cable television business is unsustainable.

Just Wide of the Net

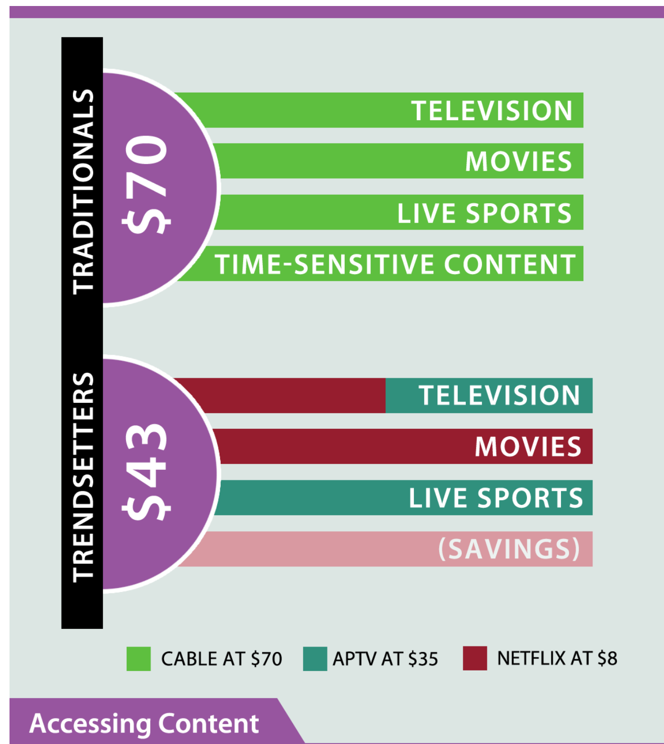
To penetrate cable television's murky outlook, Rogers launched a medium for online content distribution in 2010. Rogers Anyplace TV offers on demand TV shows in addition to select live content and movie rentals. The service is distributed through mobile devices and game consoles and is free to all Canadians with further exclusive access given to Rogers cable television customers based on their subscription. With much of Anyplace TV's content already available for free on various broadcaster websites, the product solely adds value by consolidating content onto one convenient distribution medium. Without providing exclusive content, or significant additional value for cable subscribers, Anyplace TV fails to adequately convince cable TV customers to stay with Rogers over platforms like Netflix or Hulu.

"ROGERS IS UNDERUTILIZING ANYPLACE TV AND WOULD BENEFIT FROM UNBUNDLING IT FROM ITS CABLE TELEVISION PACKAGE, CREATING A SEPARATE, BRAND NEW SERVICE OFFERING."

Cutting its Own Cord

Rogers is underutilizing Anyplace TV and would benefit from unbundling it from its cable television package, creating a separate, brand new service offering. The new offering would grant subscribers unlimited access to all the live sports content that Rogers owns, in addition to the library of recently aired TV shows it currently offers. For the cord-cutter, Anyplace TV would become complimentary to Netflix – giving trendsetters access to all three types of content they desire (movies, recently aired and archived TV shows, and live sports).

Anyplace TV would consist of three separate sections dedicated to live sports, TV shows and NHL GameCenter Live. The live sports section would offer access to live events in their usual format alongside new differentiated content such as alternative camera feeds and interactive content overlays. The TV section would offer recently aired television on-demand. The third section would integrate NHL GameCenter Live, which offers access to out of market hockey games within Anyplace TV. Currently offered movie rentals should be removed from the service, focusing on Anyplace TV's core offering (sports and TV shows) while aligning it as a complimentary service to Netflix. Renting movies, while not appealing to cord-cutters, still provides value to traditionals and should remain an option through cable television. Rogers should continue to distribute Anyplace TV over desktops, mobile, and gaming consoles while increasing the number of devices covered and enhancing cross-functionality between devices. With little overlap to services like Netflix, Anyplace TV could bolster its retention rate, as it provides more unique, defensible value to customers.



Accessing Content

The Price is Right

When purchased as a standalone service, Rogers Anyplace TV should be priced at $35 per month. Existing cable television subscribers should be charged an additional $5 per month for the service. This pricing strategy aligns with the content demands of cord-cutters and offers more value to current cable subscribers in an attempt to drive up ARPU. For trend setters, the Anyplace TV service can be paired with an $8 Netflix subscription, allowing access to the desired content at a price of $43 per month; lower than the price of cable subscriptions which range from $40-100 per month. The $35 price tag is even more appealing when considering there is currently no legal access to all live sports outside of premium cable television packages, which range from $70-100 per month. Although close in price, basic cable packages offer substantially less live sports content than the new Anyplace TV offering and do not offer a library of past content.

Line Change

By unbundling Anyplace TV, Rogers will be able to retain the current cable television customers that are contemplating cord-cutting (16%) by transferring subscriptions to the new Anyplace TV offering. Additionally, the new offering could attract the 400,000 Bell customers who are looking for alternatives to highly-priced satellite and IPTV packages. Lastly, Anyplace TV would better appeal to the cord-never segment, which is poised to grow exponentially in conjunction with generational rollover. At 3% of the Canadian population (or 420,000 households), gaining access to the cord-never segment represents an exclusive opportunity for Rogers to grow its subscriber base ahead of its biggest rival, Bell. In total, there are approximately 1.2 million potential customers for Anyplace TV in the next year. Given that Anyplace TV generates half the ARPU of traditional cable, Rogers would have to capture approximately 30% of the potential customer base in order to recuperate revenues from the 178,000 lost cable television subscribers over the past four years. In addition to recuperating lost revenues, Rogers would benefit from potentially increasing viewership of its live sports content, effectively driving up the advertising revenues generated.

From One Pocket into the Other

A risk of introducing Anyplace TV as a standalone offering is cannibalization of existing cable television subscribers; however, this is minimal since the new Anyplace TV offering is tailored to cord-cutters and is unappealing to the habitual traditionals. Subscribers that cut the cord in favour of Anyplace TV would have done so at some point in the future, and thus Anyplace TV allows Rogers a way of retaining these customers, albeit at a lower ARPU. Nonetheless, cord-cutters are switching to avoid the high costs of cable television and are inherently subscribers of lower-priced packages. In this case most of the lost cable television revenue would be offset by the incremental Anyplace TV.

As a separate service, Anyplace TV can participate in the bundling discounts Rogers offers its customers for keeping all their services under the same roof. This provides incentive for cord-cutters to procure their necessary internet and wireless services through Rogers. Should customers choose to bundle, Rogers would experience an increase in internet and mobile data usage, two highly lucrative business segments for telecoms. Overall, Anyplace TV supports the ecosystem that Rogers operates within; more importantly, it supports the services of the future for the company.

Last Minute of Play

The NHL deal presents the perfect opportunity for Rogers to land a major jab at Bell, with a hockey package that cannot be matched and a content distribution system offering far better value than the current cable television model. A Rogers-facilitated shakeup of the industry serves to accelerate the effects of cord-cutting while accessing an untapped customer segment of cord-nevers. With the NHL deal set to begin in Fall of 2014, Rogers must act immediately to ensure a timely launch ahead of the 2014-2015 season. In doing so, Rogers can become the go-to provider of live content over the internet, elevating its legacy cable television business to the television battleground of the future.

4TH AND LONG

How Fantex can develop a sustainable stock trading platform for investing in athletes

By Amir Bashir & Janek Boski

Arian Foster, running back for the Houston Texans NFL team, announced in late 2013 that he would be the first athlete to launch an initial public offering (IPO) of himself, giving up 20% of all future earnings for $10.55 million up front. Shortly after, San Francisco 49ers tight end, Vernon Davis, and Buffalo Bills quarterback, E.J. Manuel, both announced their own IPOs as well. These investment opportunities were announced in partnership with Fantex Inc., a newly formed market exchange that seeks to be the first trading platform where athletes can launch their IPOs. Fantex's vision is that investors will dedicate capital towards creating a portfolio of athletes, similar to that of corporate stocks, as they seek to generate a return.

Here are the Stats

Fantex operates similarly to the New York Stock Exchange, but provides a much more integrated service by recruiting, valuing and marketing athletes to potential investors. Currently partnered with investment bank Stifel Nicolaus & Company, Fantex has so far embarked on an IPO roadshow offering a stake in the future income of selected NFL players to investors through a tracking stock. The trade-off is as follows: the athletes receive an upfront payment in exchange for a set percentage of their future earnings. Fantex collects 5% of the income from these earnings to fund their platform stock, which is essentially an exchange trade fund (ETF) with a small stake in all players 'brands' that Fantex represents. On top of capital gains generated from trading players' stock, investors are periodically distributed a dividend at the company's discretion. Fantex controls all fund disbursements, much like a public company would control the movement of excess income to its shareholders. This process continues until Fantex decides to convert the investors' tracking stock into shares of Fantex Inc. platform stock. This occurs when Fantex's board initiates the conversion under 'good faith', due to player retirement or a material event resulting in the likely decline in the athlete's income. With this integrated structure, investors are not only speculating on the success of the athlete, but also on Fantex's operations, as they will have a stake in the company if they keep their investments for long enough.

"FANTEX'S VISION IS THAT INVESTORS WILL DEDICATE CAPITAL TOWARDS CREATING A PORTFOLIO OF ATHLETES"

Fantex's revenue model is also based on the volume of transactions on the platform. Fantex charges a 1% fee on the total value of trades, compared to the NYSE which makes $0.003 per 100 blocks of shares traded on the exchange. To illustrate this model, if 1000 shares of Arian Foster traded at $10 on the Fantex platform, the company would generate $100 in fees, while the same trade on the NYSE would yield just three cents.

An Injury Waiting to Happen

Fantex's current strategy is to appeal to emotional investors by targeting high profile players in order to provide the necessary demand to stimulate trading and build the size of the platform. However, picking investments based on emotional decisions has the potential to inflate players' valuations beyond their intrinsic value, creating an unsustainable bubble that could potentially

burst. To ensure this risk is mitigated, Fantex should focus on tailoring its future offerings to sophisticated investor demands.

Fantex should create a larger breadth of options to its investors through offering a diverse set of investment vehicles, an attractive array of athletes from different sports, and a diversified range of athletic skill levels. With its current common stock offering, Fantex's investment vehicles are comparable to traditional equity, with a set convertible feature when the underlying asset loses its value. In other words, when the athletes' ability to generate income declines, the associated tracking stock becomes worthless. With the risk of fast depreciation in the event of an injury or underperformance, Fantex should adopt multiple investment platforms that entice investors looking for a lower risk investment in athletes.

Diversify Athletic Investments

To enhance the investment appeal, Fantex should offer various security structures, such as those that resemble debt. These securities would function like a convertible debenture in which investors provide a lump sum to athletes and then receive periodic interest payments in return, while having the option to convert the security to equity and realize a stronger return should an athlete outperform expectations. This structure also has the flexibility to include debt covenants, restricting the use of the proceeds to appropriate uses such as training costs and brand development. Just like the current stock structure, Fantex would facilitate the contract and flow of payments thus receiving a 1% fee on the transaction value.

Expand the Sports Network

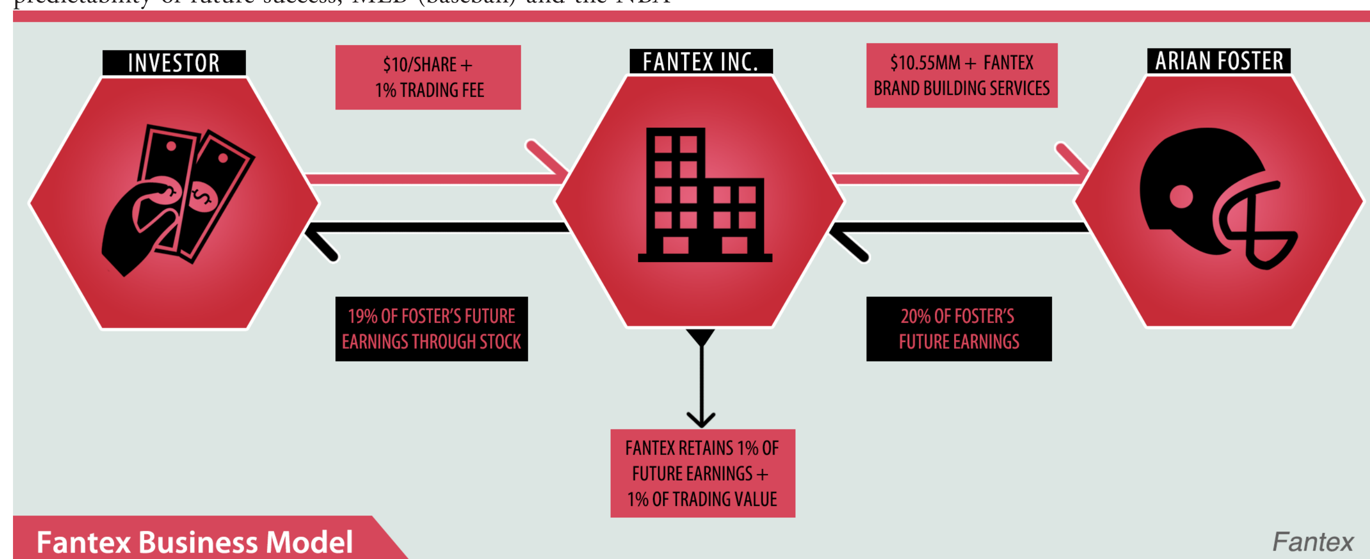
Diversifying the sports it offers is another way Fantex can develop the full risk spectrum of its platform. While Fantex's preliminary focus on football will drive demand, it is a risky sport to invest in due to high injury rates, short careers, and a plethora of players. Analysing the injury rate, the salary range, and the predictability of future success, MLB (baseball) and the NBA (basketball) have been identified to have the lowest volatility, suggesting that these sports could be an alternate low risk option for investors. On the other hand, the ATP (tennis), PGA (golf) and NFL offer the most risk due to their unpredictability of success. In the short term, focusing on low risk sports such as baseball and basketball would afford Fantex a proof of concept, while covering sports across a wide range of risk categories should be the eventual goal.

From All-Stars to Rookies

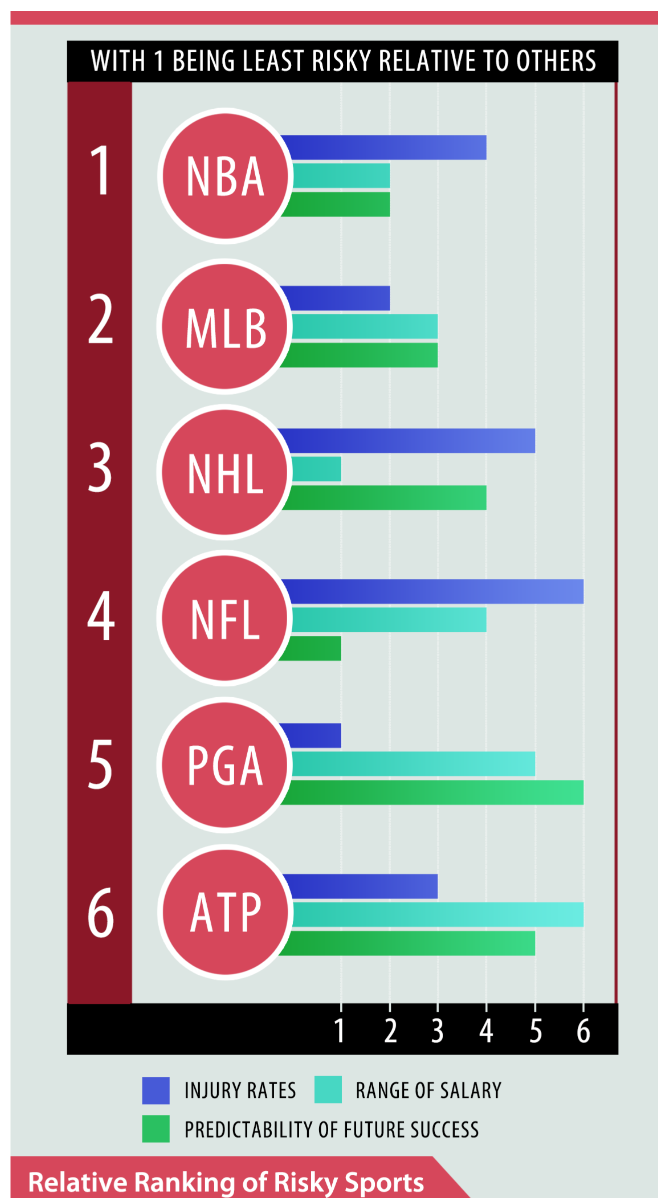
The last step in providing Fantex investors with true diversification options involves building out a wide range of athlete skill levels that range from the promising rookie to the established elite athlete. Fantex has already begun targeting big name athletes such as Arian Foster and Vernon Davis, yet a focus on younger up-and-coming players may be more valuable to Fantex's investor base.

After compiling data from the 1995-2010 NFL, NBA, and MLB seasons, a study looked to see whether the draft position of a player was correlated with him becoming an All-Star (the study identified elite players as those which were selected as All-Stars during their careers). In most cases there was no evidence to suggest that the first draft pick was more likely to become elite than the 10th. Though this pattern may not continue in the long-term, it does suggest that draft order is not as significantly related to achieving elite status. Since #6-10 draft picks are no less likely to become elite players as the #1-5 picks, yet do not receive the same performance hype, they can be seen as undervalued. This same logic can be applied to young athletes that have been in the league for 2-3 years, were #6-10 draft picks, and have yet to realize their full potential. This undervaluation provides Fantex with more attractive investment opportunities to present to investors.

The Future of Sports Investments



Fantex Business Model



Relative Ranking of Risky Sports

First and foremost, Fantex needs to earn enough capital to fund the development of the proposed financial vehicles while proving to investors and the public that athletes can successfully IPO their future earnings into valuable stock offerings. As described above, allowing baseball players to "go public", offers a lower risk option to investors and thus is a logical first step. When Fantex's entire earnings boil down to a handful of contracts, losing any player to injury is dangerous, with baseball offering a chance to minimize this risk. At the same time, as America's favourite pastime, baseball has a strong following and passionate fan base – the perfect short-term target market for Fantex.

IPOing baseball stars, such as Jose Bautista of the Toronto Blue Jays, would accomplish three key goals. First, it would show the public that these IPOs can in fact boast stable functionality. Building public plausibility serves Fantex by promoting to the next round of investors – those who may have been too timid for the first IPOs to hit the market. In addition, more athletes would be open to following the IPO route should they see their teammates successfully complete the process. This will generate a greater supply of athletes to IPO and greater demand for their public offerings from the public. Adding to this mix will be the media buzz surrounding the IPO activity. The more athletes that Fantex offers, the larger the buzz, and the more momentum the company can swing into the next round of IPOs. Most of all, the successful IPOs of a highly paid athlete will generate strong revenue for Fantex through trading and brand income collection. When Fantex finds itself with a cash surplus and a steady state of income, it will be ready to progress onto creating and installing the new investment vehicles tailored for investors with lower risk appetites.

In the anticipation of the inevitable second wave of investors – those who applaud the novelty of public athletes, but are suspicious of the security of the investment – Fantex should next develop its debt-like instruments. Like before, Fantex needs to target low-risk players to back these financial instruments. However, this isn't to protect Fantex, but rather the investors who act as the creditors. Essentially, Fantex should continue to target the same players as before, but begin structuring these new contracts as convertible debentures. In doing so, Fantex will be adding some of the required variation in financial instruments, while still limiting the risk it exposes itself to. It is important to note that most of these vehicles will be released on the same athletes. For example, a convertible debenture will require an athlete has tracking stocks to convert to. Therefore, low risk players will start having public offerings with both debt-like and equity like investments tied to them.

As investors witness the deployment of both the debt-like instruments and the success of the original equity-like investments, it will be important for Fantex to maintain a steady state with its operations. Moving too quickly may incite fears of a bubble, driving investors away from the firm. Rather, Fantex should allow these debt and equity investments adjust to the market and reach a normal equilibrium. For investors, the most powerful thing Fantex can do to convey the legitimacy of the financial vehicles is to live and grow on their own, demonstrating the validity of their structure.

Finally, as investors and the public in general become more accepting and relaxed with the idea of investing in athletes, Fantex can release the final portion of the proposed financial vehicles. By rolling out the offering of select financial vehicles, Fantex will have created a risk spectrum – a truly differentiated market based on sports figures with varying levels of risk for the large majority of investors.

Investing in athletes is inherently riskier than a corporate investment. Inevitably, athletes will decrease their earnings potential and can swiftly move to the sidelines given an injury, attracting the spectrum of high risk investors to Fantex Ultimately, these innovative financial instruments – like Arian Foster and Vernon Davis – would one day find themselves residing amongst a portfolio of stocks like Apple, MasterCard, and Bank of America.

MIRACLE ON MICE

How Rapidly Growing E-Sports Can Invigorate the Olympics

By Jack Luan & Danielle Xu

A Cry for Help

With the conclusion of the most recent Winter Olympics, the world's attention has turned to the Games and its governing body, the International Olympic Committee (IOC). Declining youth viewership and large municipal infrastructure expenditures have plagued the IOC and brought into question the sustainability of the Games if they fail to improve.

The newly elected IOC President, Thomas Bach, recently addressed these issues by advocating for the "consider[ation] [of] incorporating new forms of sport," possibly with greater flexibility to lead to "a more universal approach with regard to the Olympic program". Further, Bach intends to reform the bidding process in two ways: greater accommodation for a more diverse range of cities and increased flexibility in the choice of sports included in the Olympics to attract a larger youth audience.

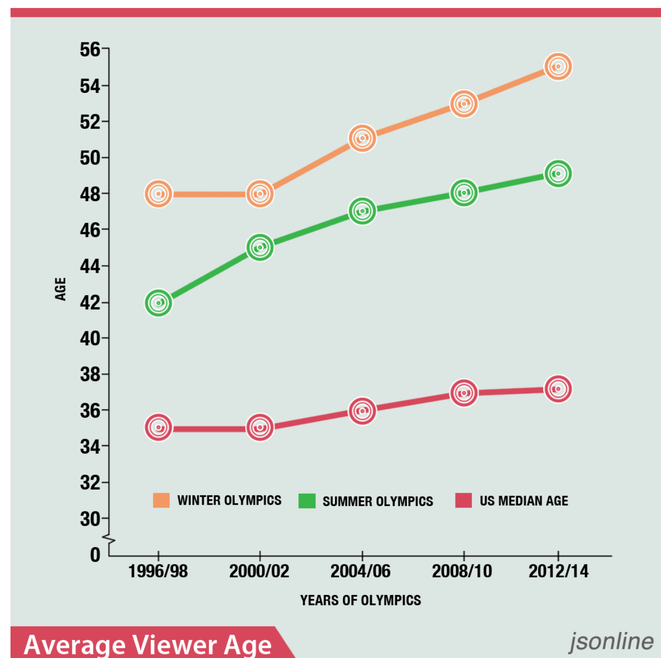
Borrowing From History

Over the past two decades, in order to appeal to younger audiences, the IOC introduced X Games events and sports celebrities, which have proven to capture far larger and younger audiences than traditional sports. Riding on an established youth following of celebrities and action-oriented sports, the 2010 Winter Olympics saw a 48% increase in 18 to 24-year-old viewership over the 2006 Games. Although this rise in viewership was impressive, room to grow still remains.

E-Sports: The New Frontier

The E-Sports phenomenon brings together the world's top video game players to compete for monetary compensation and notoriety. These games typically feature real-time strategy (RTS), first-person shooter (FPS), or multiplayer online battle arena (MOBA) format games. The most popular game currently being played is League of Legends (LoL), a MOBA pitting two opposing teams of five players against each other. Moreover, there is significant interest from viewers. Last year, the LoL World Championship finals attracted over 32 million viewers, more than the 2013 Stanley Cup Finals, or Game 7 of the 2013 NBA Finals. Furthermore, E-Sports viewership numbers easily rival those of the X Games when other popular titles such as Starcraft 2 are included.

Given the cultural relevance of E-Sports in South Korea, an opportunity exists to include E-Sports as either an event or a demonstration sport at the 2018 Winter Olympics in Pyeongchang. However, given the short time frame and IOC's reluctance to reintroduce demonstration sports, an alternative might be to replicate what the International Wushu (Chinese Martial Arts) Federation did in Beijing: running a parallel tournament during the Olympics. Although running the event in parallel to the Games would allow the IOC to objectively measure youth interest, the tournament might cannibalize viewership, and would restrict E-Sports' access to Olympic venues. Staggering the air times to host the E-Sports after the Olympics, much like the Paralympics, would bring tremendous value to all stakeholders: broadcasters, host cities, E-Sports players and the IOC itself.



Average Viewer Age

Appeasing the Broadcasters

In 2011, NBC Universal (owned by Comcast) agreed to pay $4.4 billion for the US media rights to the four Olympics between 2014 and 2020, a billion dollars higher than the next highest bid from Fox. From the beginning, it was apparent that attracting younger viewers was essential, with NBC unleashing a $40 million Olympics promotional campaign – the largest ever – dedicated to attracting younger viewers.

The youth market segment, between the ages of 12 and 17, is particularly attractive to sponsors that advertise on broadcast networks because of its substantial life-time value. As consumers age and become attached to a certain brand, the acquisition cost per consumer increases. Consequently, the impressionable youth demographic represents the ideal entry point for sponsors to build brand loyalty. Advertising spending trends emphasize the value of younger demographics, as youth hold a large portion of spending power and are expected to outspend Baby Boomers by 2017. A global benchmark study on millennials found that youth not only have significant spending power, but also heavily influence purchase decisions of other market segments, particularly their Baby Boomer parents.

Gamer Growth

While E-Sports offer similar viewership demographics to the X Games, they are growing at a much faster clip, with more highly-engaged viewers. Due to the recent increase in app-related games on tablets and mobile devices, studies now claim that 91% of all 2-17 year-olds in the US play video games. While this compares to only 58% of adults who have been playing for 13 years, it suggests that gamers continue to be engaged by the medium, even as content evolves. This justifiability results in a premium for E-Sports ads versus traditional sports ads, since E-Sports is able to access the more valuable youth demographic.

Major League Gaming (MLG) (the E-Sports equivalent of traditional sports leagues) reported 1551% growth in video hours played since 2010, representing 38.5 million hours. Even more important for broadcasters, the average viewer of MLG E-Sports has twice the click-through rate on advertisements, and has a 91% ad completion rate compared to the industry average for online sports streaming of 74%. If E-Sports were to be included in the Olympics, this would be a significant opportunity for broadcasters to not only increase the engagement of today's youth, but also capture an active audience. For Sochi 2014, NBC had broadcasting rights totaling 1,539 hours of content, and aired 539 hours, 35%, on TV. With 11,000 ads, the Sochi Olympics had a ratio of 22 ads per hour of TV content aired. Considering that the 2013 LoL World Championships had approximately 100 hours of content, if LoL were offered as an event, this would imply 35 hours of televised content and 770 ads. A doubled click-through rate could value these ads at double the $95,000 traditional sports ad. E-Sports could then generate incremental ad revenue of $146 million for NBC.

"E-SPORTS COULD THEN GENERATE INCREMENTAL AD REVENUE OF $146 MILLION FOR NBC."

Attracting Host Cities

The IOC aims to bring the Olympic Games to as many cities as possible, but increasingly high costs are deterring cities from bidding. Massive losses from three consecutive Winter Olympics during 1992 to 1998 brought significant repercussions to the host cities, leading to a significant decline in bidding cities for future events. Notably, Nagano, which hosted the Winter Olympics in 1998, is to this day dealing with the financial burdens of hosting and does not expect to achieve breakeven until 2015. Going forward, the IOC must improve the financial appeal of hosting the Games if it wishes to ensure an adequate number of attractive bids from top cities.

Fortunately, the only incremental cost of offering E-Sports is computer equipment, which is relatively small in comparison to the arenas often required for other Olympic events. For example, Brazil built an additional stadium hall for wrestling in preparation for 2016, estimated to cost $50 million, whereas E-Sports can use any existing facility following the traditional Olympic Games. The largest outlay would be display costs, typically totaling $150,000, which would be significantly offset by sponsorship. Moreover, cities constantly face post-event utilization problems for venues. However, by utilizing the infrastructure that was developed for the Olympics preceding the E-Sports tournament, cities could ensure additional reve-

nue to pay for the considerable upfront costs. Additionally, with E-Sports, the versatility of computer systems will ensure that hardware investment costs can be recuperated through the large array of uses and a liquid resale market. Lastly, the flexible nature of the sport means cities incur very little incremental cost for switching E-Sport games and disciplines, should a newer version be developed or circumstances change.

Providing Legitimacy to a New Sport

E-Sports is quickly becoming accepted as a mainstream sport by the millennial generation. The US already issues the same type of visas for professional E-Sport athletes as they do for NBA athletes, and millennials growing up in this environment may see no difference between the two sports. Since the Olympics are hosted every four years, with preparation beginning well in advance, it is crucial for the IOC to take a long-term perspective when evaluating this opportunity to proactively engage this new emerging audience. Riot Games, the company behind LoL, will likely be in the strongest advocate position. It has previously put in extensive efforts to push LoL towards mainstream acceptance, which included persuading US Customs to issue P1-A visas for its professional players.

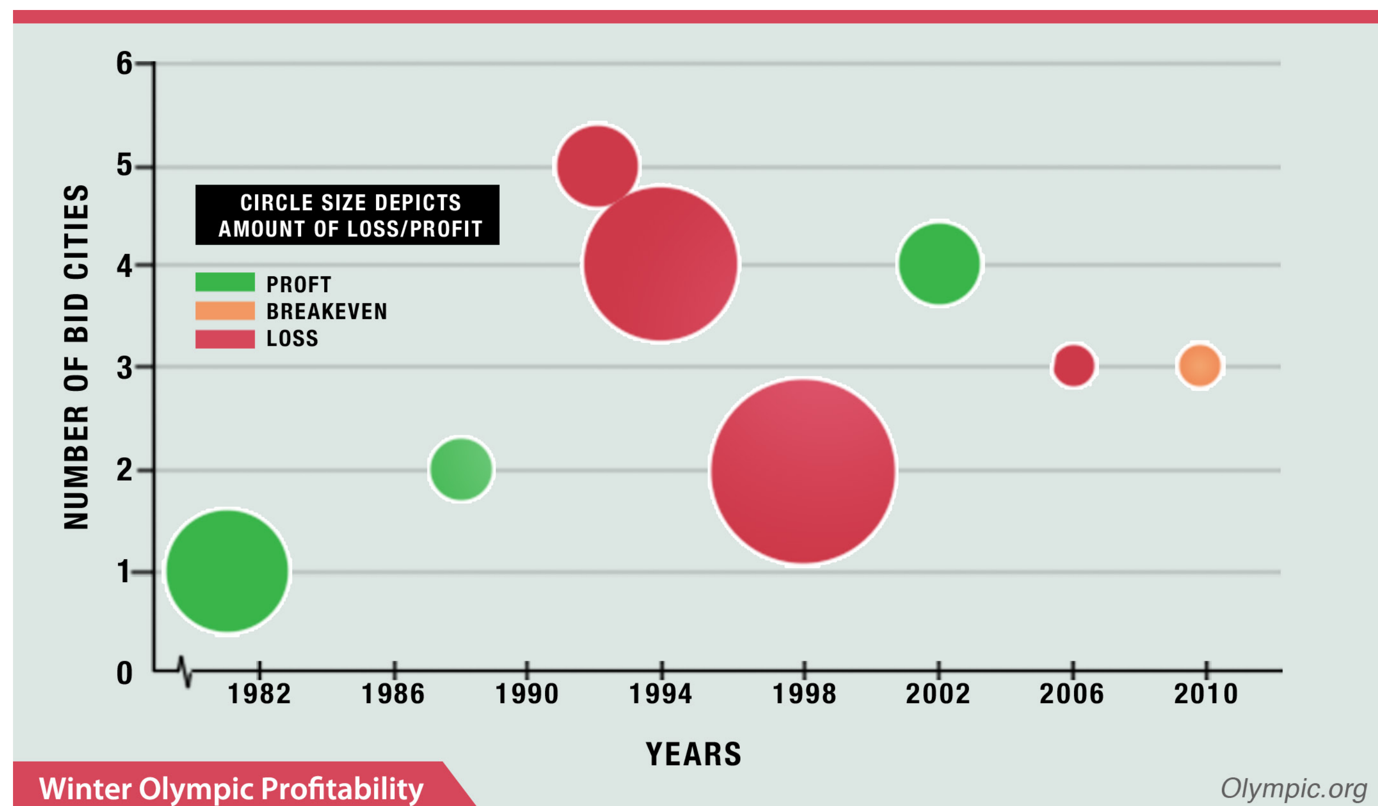
“THE IOC’S STRATEGY AND GROWTH SHOULD NOT BE HOBBLED BY ITS LIMITED DEFINITIONS OF SPORT.”

Strengthening the IOC

Regarding the IOC’s Evaluation Criteria, E-Sports has the ability to achieve all items set forth, particularly, the heavy and specific emphasis on youth and social media appeal - both themes that dovetail perfectly with the advantages of E-Sports. The average age of US viewers during Sochi 2014 reached an all-time high of 55 years old, considerably higher than the average age of 42 during Atlanta 1996. By providing a new product for future content bidders to consider, the IOC ensures that broadcasting remains a lucrative opportunity. Further, by reducing the significant capital risk burden borne by host cities through additional revenue opportunities, the IOC opens a larger potential pool of future applicants to host the games. Finally, by bringing legitimacy to a thriving novel sport, and adhering to its core principles of advocating for sports, the IOC effectively embodies its stated mandate.

The IOC’s strategy and growth should not be hobbled by its limited definitions of sport. E-Sports is growing and the IOC can either ignore this opportunity or acknowledge changing cultures by capitalizing on the financial and social potential of E-Sports in the Olympics.

In the past, the style of the Olympics and its focus has been heavily influenced by the vision of the President of the IOC. In this new era spearheaded by Thomas Bach, a strong advocate for reform and change, E-Sports can be the first leap into a more well-rounded, innovative Olympics.



Winter Olympic Profitability

AMAZON, THE RAINMAKER?

How adopting cryptocurrencies could finally bring Amazon into the black without affecting growth?

By Michael Corridore & Christian Sgro

As one of the world's largest online retailers, Amazon has been plagued by negligible profits throughout its existence. With its high-volume business model, Amazon needs every point of margin available and currently does itself a disservice by giving up an estimated 1.9% per transaction to credit card companies. The company has openly prioritized sales growth over profits as a key objective. By focusing on increasing margins upstream in the payment processing industry, the company could maintain its core objectives while simultaneously increasing profits.

Is Cryptocurrency the Solution?

The world of cryptocurrency has seen a tumultuous couple of months. Most recently, the largest Bitcoin exchange, Mt. Gox, filed for bankruptcy after revealing that it had lost almost 850,000 Bitcoins. These coins, valued at about $300M as of late February, were apparently stolen due to a technical bug in Mt. Gox's software. The price of Bitcoin immediately dropped by roughly $100 to a three-month low of about $450, a far cry from a November high of $1,100.

With such volatility and apparent security concerns, it is logical that eRetailers like Amazon are hesitant to get in on the cryptocurrency craze. But recent turmoil hardly paints the full picture of what this technology is capable of. With news of more serious financial players, including whole countries getting into the cryptocurrency space, there is clear potential for the technology. The early stage volatility and security concerns may be masking the true potential of cryptocurrency.

The New Online Currency

Cryptocurrencies are digital mediums of exchange which allow users to transfer electronic units of account wirelessly over peer-to-peer (P2P) networks. Proponents of cryptocurrencies cite its decentralized nature as a major benefit: The supply of cryptocurrencies is not controlled by any central organization but rather slowly distributed to "miners" based on a pre-established algorithm. Miners solve a computational problem necessary to facilitate the transaction and receive a cryptocurrency stipend as a reward. With the security of military-grade cryptography, transactions are safer and less susceptible to transaction fraud than existing transaction mechanisms.

The current "proof of concept" of this technology is Bitcoin, with $8.3 billion USD in circulation (at the time of writing). Bitcoin was created in 2009 by pseudonymous developer Satoshi Nakamoto, but since then other cryptocurrencies such as Litecoin, Ripple, and Dogecoin have been released based on the original, with slight variations to the protocol. One version, Auroracoin, is even sponsored by the national government of Iceland. Set for release on March 25th, it will become the first national cryptocurrency, with every Icelandic citizen eligible to claim a free amount.

Cutting Out The Middleman

The main business case pushed by proponents of cryptocurrencies is for its use in transaction processing. Transaction fees for cryptocurrencies are immaterial, with the only real consideration being the market exchange fee charged at both ends of the trans-

action. These fees can be as low as 0.25%, translating to a total transaction fee of 0.5%, considering both the merchant and buyer. Compared to the estimated 1.9% charged for credit transactions, cryptocurrency payments could result in a significant savings.

"ADOPTING CRYPTOCURRENCY WOULD BE ENTICING FOR AMAZON, BUT ITS RISKS ARE STILL DISCONCERTING"

With this in mind, if even 5% of all Amazon purchases were to be made using cryptocurrency, operating cost savings would amount to over $57 million annually. In addition, cryptocurrencies almost completely eliminate fraudulent purchases and identity theft from the payments value chain, which generally affect 5% of traditional credit payments. Amazon, as the leading e-commerce retailer with over $74 billion in revenues, has a lot to benefit from accepting cryptocurrencies.

Risky Business

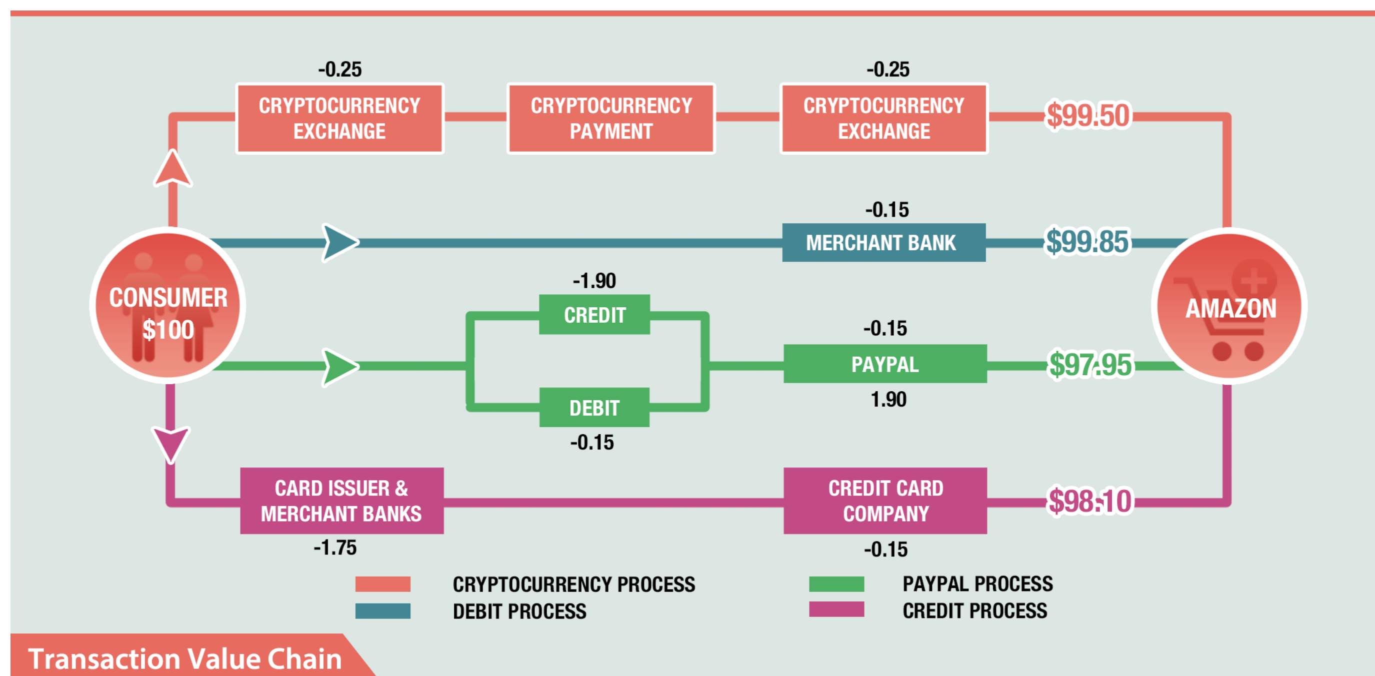
Adopting cryptocurrency would be enticing for Amazon, but its risks are still disconcerting given the early stage of the technology. First, significant security concerns have been exposed as a result of the failure of Mt. Gox. While these specific failures have been attributed to the mismanagement of the exchange, which has officially filed for bankruptcy, lingering consumer concerns are likely to limit user adoption in the near future. Many analysts suggest that the entrance of stronger players such as SecondMarket might remedy these problems, but it's still uncertain whether such moves could have a significant impact on consumer confidence.

Another big concern for cryptocurrencies is its rampant volatility. Cryptocurrency prices fluctuate 10% on the average day, and several commonly double or halve in value. Considering that Amazon's business model is focused on creating a ubiquitous customer experience, volatility could seriously hurt its ability to attain mass adoption. This creates a classic "Chicken & Egg" type problem where stabilization can only be achieved with mass adoption, yet the major barrier to mass adoption is the price volatility.

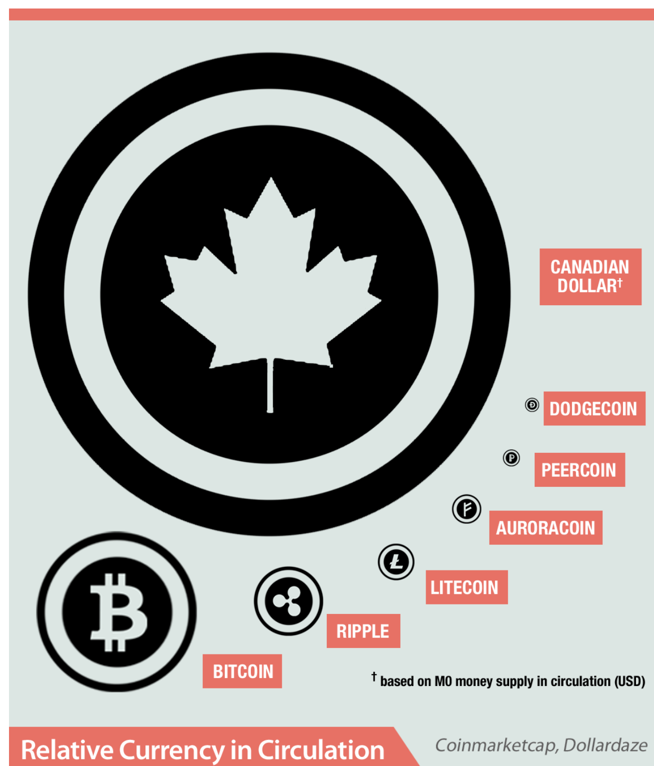
Regulatory action also poses a serious threat, considering that at any time governments can regulate cryptocurrencies either positively or negatively, heavily impacting their value and long-term viability. Both Russia and China have limited the use of cryptocurrencies, and with the recent collapse of Mt. Gox, a US senator has demanded a ban in the States. Even with positive sentiment from US regulators, any regulative actions focused on illicit activities are difficult to predict, creating an ambiguous regulatory environment that may not subside for quite some time.

The Amazon eCoin

The uncertainty associated with cryptocurrencies is not in itself a deal-breaker. There are tools Amazon could use to implement the technology successfully: consumer concerns can be addressed with marketing, volatility can be addressed through offering discounts and Amazon cobranding, and regulatory risk can be addressed through lobbying efforts. But cryptocurrencies aren't the only way to cut credit card companies from the transaction value chain. Automated Clearing House (ACH) transactions, i.e. direct bank account transfers, often charge a fee of below one cent per transaction. In fact, the cryptocurrency transaction chain would need to start and end with ACH transactions regardless. Therefore, the introduction of cryptocurrencies simply introduces additional intermediaries.



Transaction Value Chain



Relative Currency in Circulation

Coinmarketcap, Dollardaze

Amazon currently does facilitate ACH transactions but has limited adoption due to consumer hesitance to share bank account information online. Amazon could thus use the hype and media attention surrounding cryptocurrencies to spur ACH adoption by launching its own pseudo cryptocurrency. Simply put, this would essentially be a digital currency with a one-to-one conversion rate to USD, effectively removing all volatility risk. Amazon could then integrate this "eCoin" system into its Amazon Payments platform to replace its current ACH play. This would allow users to make ACH transactions as they have before, with Amazon facilitating direct transfers and no requirement to hold eCoins. Simultaneously, Amazon could also facilitate peer-to-peer transaction functionality, with eCoin holdings possibilities, for the added convenience that users of traditional cryptocurrencies enjoy.

Amazon should further encourage adoption by offering a free year of Amazon Prime to customers who sign up to the eCoin by entering their bank information. Once this bank information has been added, the eCoin payment choice will appear as the preferred payment method every time the user makes a subsequent purchase. This has the dual purpose of growing the Amazon Prime subscriber base, a current strategy aimed at growing consumer spending with Amazon, and facilitating the switch to low-cost transactions. This has the overall effect of growing profitability, a tactic in the best interest of the eRetailer infamously known for its razor thin margins.

To strengthen the offering and mass adoption potential, Amazon should also partner with other progressive online retailers to accept eCoins through the Amazon Payments system. Amazon is in a unique position in the payments processing space because it is not necessarily motivated to make its profits from Amazon Payments. Amazon could willingly undercut the going transaction processing rates, like those from credit cards and PayPal, because its motivations lie in pulling down transaction rates industry wide. By offering a substantially lower rate to partnered merchants, it not only spurs merchant adoption, but also places downward pressure on transaction processing rates charged by Visa and MasterCard. Not only could Amazon save on the in-house transactions converted to its new eCoin, it would also save in the long-term on all transactions as other providers are forced to drop their prices.

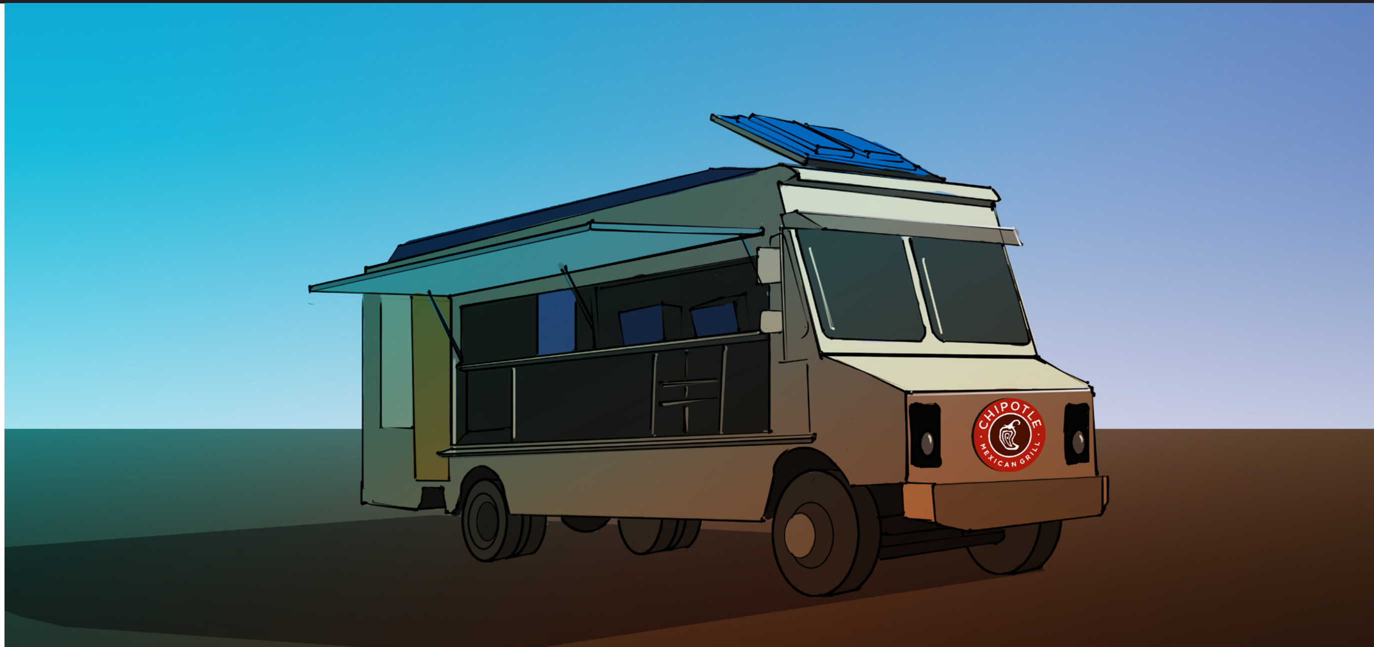
Going Mainstream

While this pseudo cryptocurrency can replicate the cost savings features of cryptocurrencies, there are many other benefits of cryptocurrencies that need to be considered. For one, the distribution and decentralization of cryptocurrency can help expedite global expansion. By not dealing with a country's domestic currency and instead accepting cryptocurrency, Amazon could have foregone much of the currency and political risk associated with international expansion. This is a feature not inherently replicable in the eCoin pseudo cryptocurrency.

Additionally, cryptocurrencies enable microtransactions, allowing consumers to pay for goods in arbitrarily small denominations. With microtransactions, charging a few cents online for a good or service becomes feasible due to the immaterial transaction fees associated with cryptocurrency. This could be the catalyst for new and profitable business models for high volume, low cost services. This could especially fit with Amazon's moves towards media streaming services, including a rumoured foray into the music streaming business. While arbitrarily small denominations could easily be implemented into the eCoin protocol, users of this service aren't incentivised to hold a balance, a required feature for facilitating microtransactions.

Cryptocurrencies then still offer substantial value beyond just that of transaction cost savings, but most of this value can't be realized until the uncertainty in cryptocurrency is resolved; secure exchanges need to be created, volatility needs to subside, and regulators need to make their position clear. Also, with the proliferation of cryptocurrencies, Amazon would need to wait for the market to choose a winner. But Amazon, with their eCoin offering, can build experience with digital currency transactions, accumulate an eCoin user base, and develop the capabilities needed to effectively compete when a cryptocurrency reaches the mainstream. Amazon can actually go one step further. By ensuring that it builds out its eCoin platform in a flexible way, Amazon can transition its service to a real cryptocurrency when the uncertainty subsides and the strategic benefit of geographic expansion and microtransaction features becomes compelling.

Amazon, with a semi-cryptocurrency strategy in the short term, can take advantage of the transaction cost savings today while



HITTING THE ROAD

How Chipotle Mexican Grill can maintain its sizzling growth

By Ryan McCrea & Matt Nesvadba

Over the past three years, Chipotle Mexican Grill (Chipotle) has baffled investors, delivering more than 140% share price accretion. Through its 1,600 restaurant locations from Frankfurt to Vancouver, the chain exceeded analyst expectations for Q4 2013, increasing net income by 30% and same store sales by 9.3% over Q4 2012. Chipotle has become the star of the up-and-coming 'fast-casual' segment, defined by the quick delivery typical of fast food but made with higher quality ingredients.

Despite its well-timed entrance into fast-casual, Chipotle faces new entrants that have taken notice of this segment's growth. With a price-to-earnings ratio twice that of the industry average, Chipotle will need to deliver on investor expectations by maintaining their market-leading position and growing the bottom line.

Somewhere Between Fast Food and Premium-Casual

Chipotle is well-positioned in the fast-casual industry, which has been experiencing rapid growth in recent years. As a relatively new segment dating back to the early 1990s, the fast-casual industry experienced a surge of popularity following the 2008 financial crisis as consumers began to substitute more expensive premium-casual restaurants for relatively cheaper fast-casual restaurants. The industry is now one of the fastest growing in North America. At $17 billion in annual revenue, it has been growing at a compound annual growth rate (CAGR) of 10% since 2007.

> **"DESPITE ITS WELL-TIMED ENTRANCE INTO FAST CASUAL, CHIPOTLE FACES NEW ENTRANTS THAT HAVE TAKEN NOTICE OF THIS SEGMENT'S GROWTH"**

Fast-casual consumers demand what can be described as a hybrid between fast food and full-service restaurants. They crave a quick meal, but want some of the amenities offered by full-service restaurants; more restaurant space and a more interactive service experience overall. Firms that aim to be successful in the fast-casual industry must place an emphasis on atmosphere and decor, provide strong customer service, and ensure high quality ingredients. Fast-casual customers are willing to pay higher prices at roughly $9 to $12 per meal for comparatively higher quality food over their limited-service counterparts, which average $5 to $7 per meal.

Chipotle's Engine

Key differentiators for Chipotle are the consumer-oriented restaurant designs and customizable menu, using ingredients that are produced with consideration for the environment, animals, and farmers. Furthermore, all of Chipotle's locations are company-owned to offer a consistent eating experience and to ensure stringent quality control. Chipotle believes this draws a socially-conscious customer profile by offering "Food With Integrity," but at a significant cost; Chipotle pays a comparatively

> **"FAST-CASUAL CONSUMERS DEMAND WHAT CAN BE DESCRIBED AS A HYBRID BETWEEN BOTH FAST FOOD AND FULL-SERVICE RESTAURANTS."**

higher cost of goods sold (COGS)/Sales at 33%, while the industry average sits below 29%.

Fast-moving Competition

The greatest threat to Chipotle's continued success comes from fast food chains like Taco Bell. In 2012, the Mexican eatery launched the "Cantina Bell" menu in hopes of emulating Chipotle's success. A recent survey by hedge fund Greenlight Capital illustrated the significance of this threat by noting over 23% of Chipotle customers reported they had already tried the Cantina Bell menu, and from those, two-thirds stated they would return to Cantina Bell. In the face of growing competition, Chipotle needs to look at diversifying strategic initiatives that will spotlight its competitive advantages of high quality food and quick service.

Companies like McDonalds have also attempted to move into the higher-end restaurant space. The mega-chain changed its restaurant decor and product offerings over the past few years in order to better position itself to capture customers in the 'fast-casual' segment. Given the stronger supply chains, lower COGS, and larger marketing budgets of these fast food chains, the management team of Chipotle faces a significant threat to their company's market share.

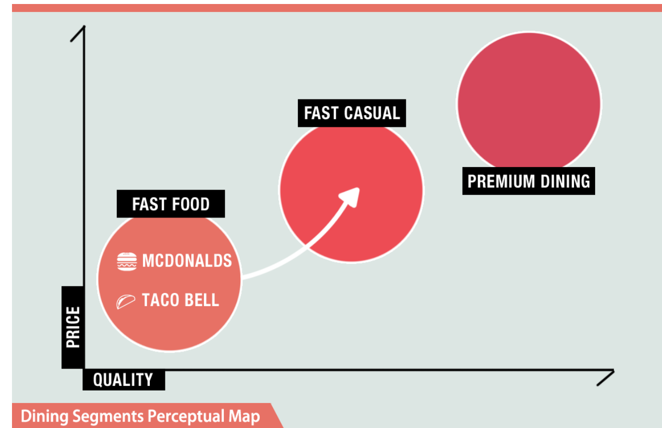
Finding an Alternate Route

Chipotle has historically been limited to serving customers willing to pay a premium for both higher quality food and a pleasant environment. If Chipotle were able to eliminate its occupancy costs, it would find itself in a more competitive position. In order to maintain its growth in the face of increased competition, Chipotle should implement a sub-brand of premium food

> **"IN ORDER TO MAINTAIN ITS GROWTH DESPITE INCREASED COMPETITION, CHIPOTLE SHOULD IMPLEMENT A SUB-BRAND OF PREMIUM FOOD TRUCKS."**

trucks. In this way, Chipotle could offer high quality food to a new range of customers without harming its brand image in the eyes of its core customer base.

Similar to the fast-casual industry, food trucks have taken off since the 2008 recession, growing sales at a CAGR of 12.4%



Dining Segments Perceptual Map

into 2014, with total sales approaching $1 billion. Food chains that have considered adopting a food truck method have primarily done so with the intent of using it as a marketing tool, rather than as a distribution method. Although many chains rely on their brand to attract potential customers, the inherent value of Chipotle is actually the food quality and its unparalleled customer operations. By offering a similar value proposition through a premium food truck, Chipotle can take market share from its fast-food competition without compromising its own position.

Chipotle should continue with its ingredient sourcing and food quality practices. However, maintaining an efficient customer processing service would require some changes. First, Chipotle should allow customers to place their orders over a mobile device for pick-up through an express window. For non-app orders, Chipotle could have sales associates take customer orders

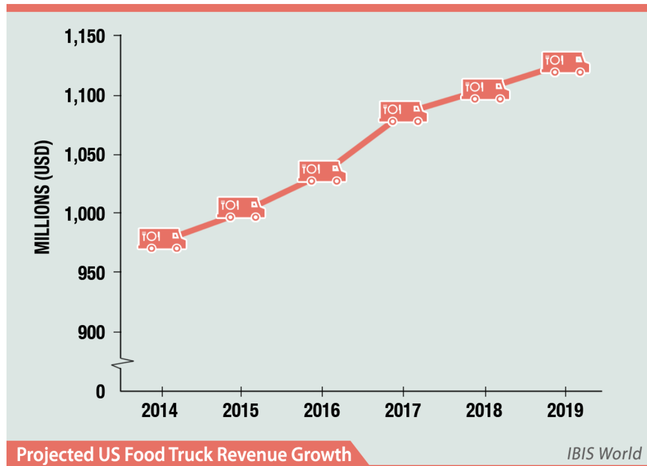
> **"THE POTENTIAL TO ACHIEVE STRONG PROFITABILITY IS HIGH, AS THESE TRUCKS WOULD NEED TO SELL LESS THAN HALF THE NUMBER OF BURRITOS PER LOCATION."**

outside of the food truck and send the information wirelessly through a point of sale device. Also, limiting the menu to just the Chipotle staple burrito would allow the fast delivery process to be maintained.

Rolling Out

The potential to achieve strong profitability is high, as these trucks would need to sell less than half the number of burritos per location. This works out to 290 burritos per day versus 600 in brick-and-mortar locations, assuming Chipotle reduces its price for the food truck from $9 to $6.50 per burrito. This falls just above the $6.33 average price of a food truck entrée.

The lower initial investment required for food trucks versus a traditional storefront location equates to less than $200,000 per



Projected US Food Truck Revenue Growth

truck compared to the $800,000 required for a storefront. Furthermore, the lower operating costs in managing a truck result in a profit margin of 40%, much higher than the 17% typically achieved in-store. Clearly, food trucks present an opportunity to make a meaningful contribution to Chipotle's bottom line while simultaneously diversifying revenues.

Beware of Hazards

There are some risks for Chipotle in pursuing this strategy. First, the sales cannibalization figure may be higher than accounted for in the projections. This concern is highlighted by the fact that cannibalization decreases by approximately 30% for every mile between fast food locations. As such, if these food trucks are situated more than three miles away from Chipotle's existing stores, there should be a cannibalization rate of approximately 10%. Other potential issues, such as the effect that truck breakdowns and seasonality will have on profitability, were also accounted for and were found not to have a significant effect on the overall internal rate of return. As such, effective location management for the food trucks, both in relation to Chipotle's stores and in relatively warm climates, will be essential to the success of this venture.

"THE LOWER INITIAL INVESTMENT REQUIRED FOR FOOD TRUCKS VERSUS A TRADITIONAL STOREFRONT LOCATION EQUATES TO LESS THAN $200,000 PER TRUCK COMPARED TO THE $800,000 REQUIRED FOR A STOREFRONT."

The Perfect Destination

The best US cities to target for premium food trucks could be identified using several criteria. Extrapolating demographic data from New York City illustrates that one Chipotle restaurant services a market size of approximately 200,000 consumers. Currently, standard food trucks in US cities serve market sizes from 75,000 to well over 200,000. Assuming a typical Chipotle market size of 200,000 can be served by a Chipotle food truck, over 100 cities in the US could provide the customer base for at least one truck. Additional factors need to be considered to narrow down the list of cities.

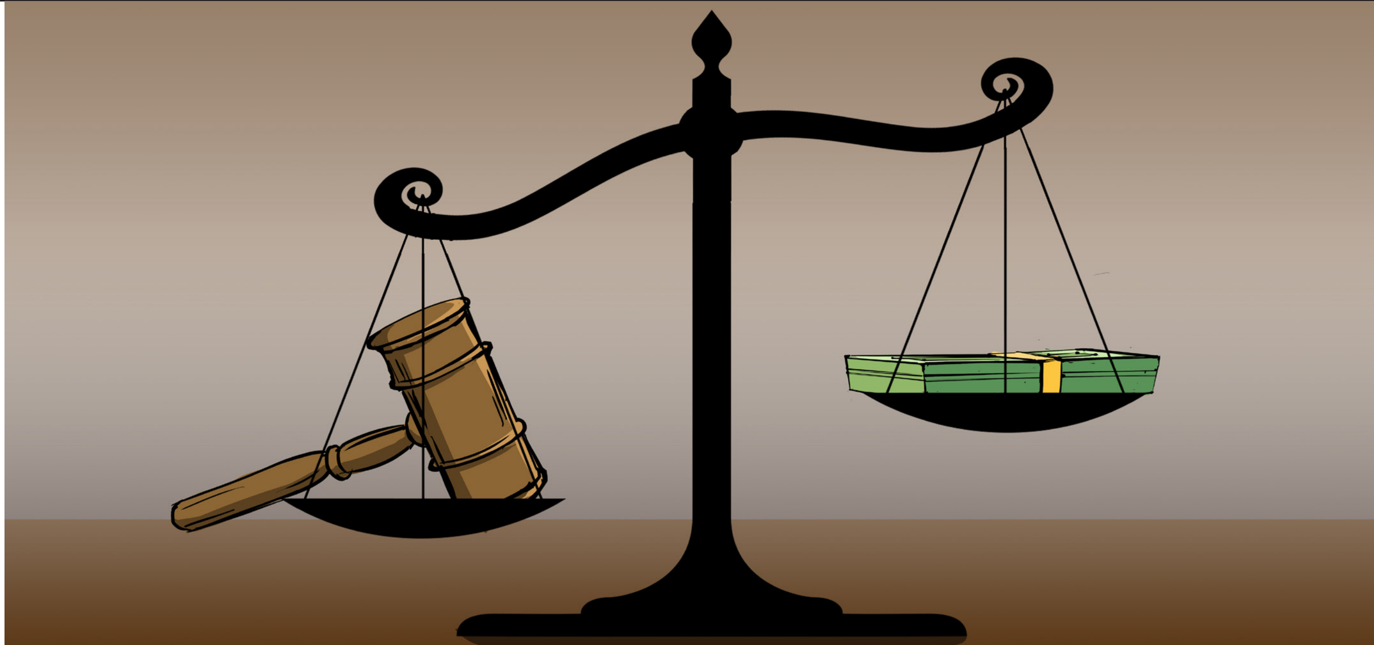
"CHIPOTLE MEXICAN GRILL STILL HAS SUBSTANTIAL ROOM TO EXPAND ITS BOTTOM LINE AND DIVERSIFY THE SOURCES OF ITS TOP-LINE REVENUE. "

First, recent studies suggest that fast food consumption is positively correlated with increases from low to middle-income brackets. In addition, population density in the area (Chipotle requires a population density of 30,000 in a two-mile radius) and the rate of urbanization need to be taken into account. Using all of these considerations, 89 cities can be used for the initial rollout of the food trucks.

While these cities can support the customer base required to validate investment in a food truck, one of the greatest concerns to food truck owners is municipal government regulations. However, the cities proposed are relatively urbanized, where public demand is leading to deregulation. Nearly half of these cities are in the southern US, where a comparatively warmer year-round climate will extend the operating season of food trucks. Of the remaining cities, roughly 15% are located in the Midwest, 31% in western states, and 7% in the Northeast.

Conclusion

Chipotle Mexican Grill still has substantial room to expand its bottom line and diversify the sources of its top-line revenue. Launching a series of premium food trucks will allow Chipotle to compete directly with fast food chains that are encroaching on its traditional market share. This will steer the company towards continually exceeding analyst expectations and delivering significant shareholder value for years to come.



BEYOND A REASONABLE RETURN

Third-party investors finally join the Ontario market for litigation financing

By Mark Goad & Adam Voorberg

Alternative Litigation Financing

Litigation financing for those unable to fund their own proceedings has been an untapped opportunity for Ontario investors, until now. Alternative litigation finance (ALF) or 'third-party' finance refers to financiers unrelated to the legal dispute at hand contributing to the costs of litigation in exchange for a share of any potential proceeds. Additionally, ALF offers insurance against adverse cost awards, where the challenging party is forced to cover their counterparty's legal costs. Stringent regulations in Ontario have historically prohibited third party investors from taking part in class action suits, while other jurisdictions have spawned a market for these investments. Firms allowed to participate, such as New York's Burford Capital, achieved a 91% return on capital, making $32 million from a mere nine cases. In such a market, litigants and law firms have access to third party financiers to whom they can sell a portion of their suit, transferring returns to savvy investors willing to accept the risk. One's capacity to afford litigation will never again impede access to justice. A capital market like this could soon be available for the 40 class action suits launched annually in Ontario, a market worth an estimated $325 million. Today, ALF is practiced in the US, Britain, and Australia and could soon be widely practiced across Canada.

The Canadian Landscape

Private litigation financing has been restricted in Canada since 1897 under laws prohibiting officious intermeddling, known as champerty. Policy makers feared that outside investors would have a material impact on the lawsuit proceedings they had invested in. But, after more than a century of stern enforcement, the Canadian judiciary has begun to lift restrictions in order to promote greater access to the justice system. The first notable step on the path towards ALF was the abolition of restrictions surrounding legal contingency fees, an arrangement where claimants pay their counsel a percentage of awarded damages and are not obligated to pay in the case of a loss. The majority of class actions, for example, are financed and insured using credit extended by the counsel in the form of a contingency arrangement.

The Class Proceedings Fund (CPF) was the first ALF fund in Canada, created to increase potential claimants' access to justice. It operated as a government-run fund with a monopoly on the legal finance credit market for over twenty years. Created in 1992, the fund has provided financing to cover legal disbursements in exchange for a 10% commission from any recovery or settlement. The fund started with $500,000 of seed capital in 1992 and over the next 20 years earned $24.24 million on 30 successful lawsuits and a further $1.86 million from interest payments. Of the 30 successful suits, exactly half were consumer protection class actions, of which 11 cases involved consumer groups filing against corporations or banks for finance related crimes, including charging criminal rates of interest or not disclosing certain fees. Only 11 of the fund's claimants have ever lost their proceedings in court; accordingly, the fund paid out $7.47 million in adverse awards to defendants. In aggregate, the fund's balance is currently $7.82 million, representing a compounded fund growth rate of 14.74% per annum, exceeding the 6.7% growth of the S&P/TSX Composite index over the same period.

The future of ALF policy regulation has yet to be determined. The Canadian judiciary has allowed precedent to evolve over the past 20 years and is just now beginning dialogue on access to justice, ALF, and the adverse cost regime in Ontario. Recent reviews by the Law Foundation of Ontario and the Ontario Attorney General have affirmed the value of the CPF to enhance class litigants' access to justice, however, only the legislature has the authority and power to guarantee the fund's future. As long as financing mechanisms continue to promote public good as opposed to focusing on exploitive profits, the potential for ALF is promising. While the future is still uncertain, ALF through the CPF has performed well and provided Canadians access to the justice system when they would otherwise have been shut out because of cost. As judicial comfort grows with the concept of ALF, there is a significant opportunity for private funders to enter the market.

Investing in Justice

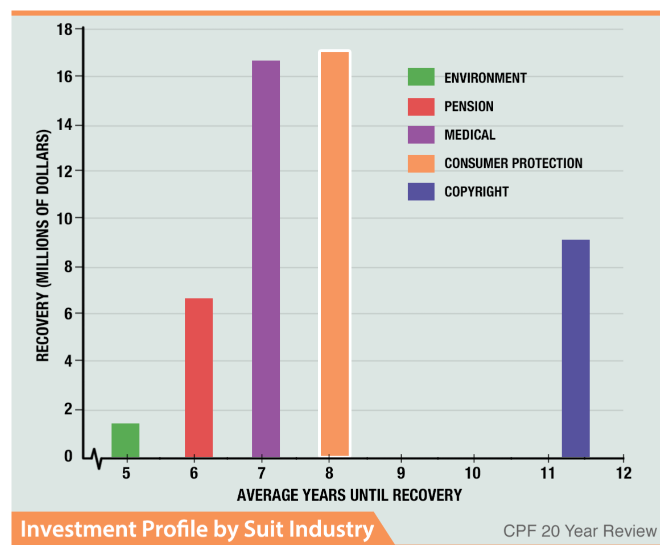
For investors, litigation financing is a unique investment alternative. ALF returns behave much the same as private equity investments, but with little correlation to the broader market and economy. Like private equity, the time horizon for realizing returns is relatively long; the average CPF case took 7.5 years to pay out. However, somewhat unlike private equity, there is a further downside, as investors can lose more than 100% of their original investment if they insure against adverse costs. ALF opportunities differ from private equity investments in that the information disclosed to investors is limited and investors are not allowed to influence any decisions made in relation to the proceedings of the case. That said, the performance of the CPF is very compelling and provides healthy compensation for these investment risks.

As a private ALF funder, a firm would not have to follow the same investment prospectus as the CPF and could be more selective, leaner, and ultimately more effective. With a different mandate than the CPF, private ALF funders would be able to service litigants who were previously unable to secure financing. Further, private ALF funders would provide an alternative, often at a lower required commission, as private ALFs have historically demanded 7-9% of awards versus the 10% CPF demands. With firms in the US making significant returns, and CPF in Canada demonstrating financial feasibility, Canadian investment funds should look to capitalize.

"FOR LAW FIRMS, LITIGATION FINANCING REPRESENTS ACCESS TO CAPITAL THAT HAS TRADITIONALLY BEEN ELUSIVE IN THE LEGAL SECTOR."

Class-ifying the Opportunity

For law firms, litigation financing represents access to capital funds that have traditionally been elusive in the legal sector. Law firms are privately held entities that are forbidden from raising capital from non-partners and thus have a decidedly finite pool of resources to extend by way of financing or indemnity, especially to class actions. Plaintiffs who cannot convince a firm to represent their claim because the firm cannot afford the litigation or is unwilling to accept the exorbitant risk of an adverse cost award may not be able to pursue legal action, even if they have a legitimate claim. With more legitimate claims than financing available to pursue them, class actions seem like the ideal target for ALF investors.

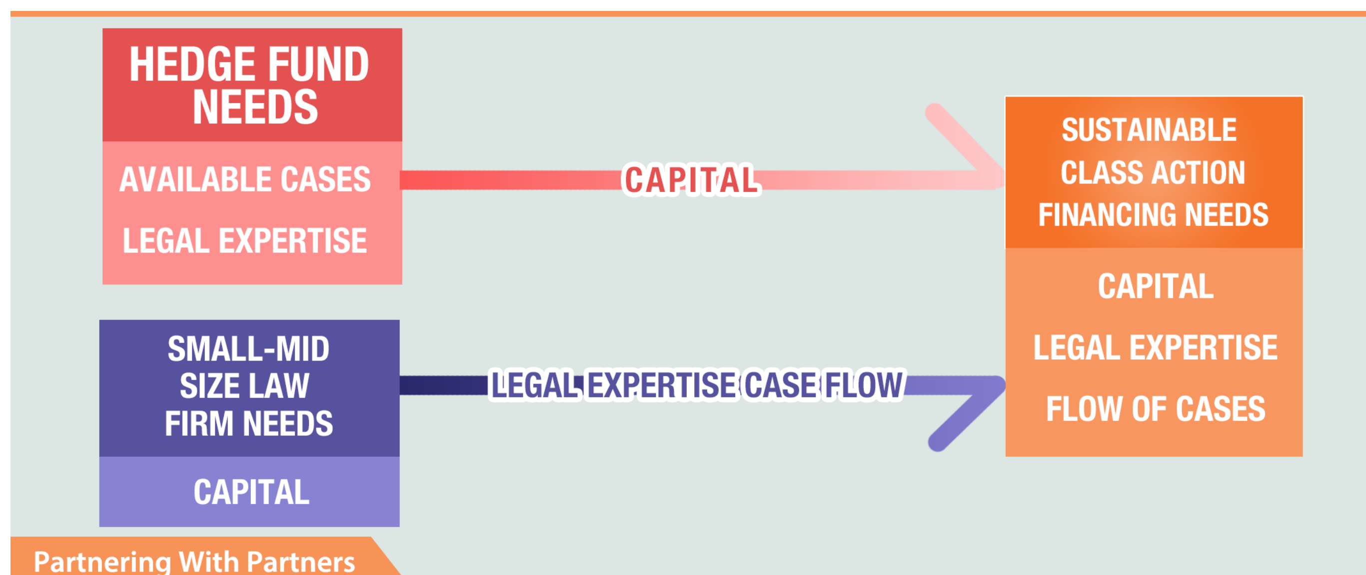


Investment Profile by Suit Industry
CPF 20 Year Review

Members of the Canadian judiciary have reasoned that the lack of credit available to Canadian civil litigants, especially class actions, represents an unacceptable limit to their access to justice, and that third-party financing agreements are legal, notwithstanding legislation regarding champerty. This reasoning has been recognized in all successful ALF applications; see Dugal v. Manulife Financial; Fehr v. Sun Life; and Baynes et al. v. Kinross. Despite strong support from the Canadian judiciary, ALF agreements are still uncharted territory in the Canadian legal system. Focusing on class actions, where legal challenges to ALF are less likely to succeed, seems like the logical strategy from a legal perspective as well.

Partnering with Partners

Deregulation of the Canadian legal finance market has created a legitimate opportunity for investors to diversify their portfolios and share in the upside of civil litigation. Alternative or event-driven hedge funds have pre-existing mandates to diversify market risk through alternative investments. These funds are the best-positioned financiers to capitalize on this opportunity because they have the adjacent competencies in their resources, expertise, and organizational impetus. These alternative or



Partnering With Partners

event-driven funds should partner with small to medium size law firms who lack large capital reserves, especially those specializing in class action suits, in order to facilitate the arrangement of alternative financing agreements. These funds will likely need to hire key employees that have the legal experience to properly perform due diligence on cases; determining the appropriate amount of financing to extend and what percentage commission on the award the fund must demand to compensate for their risk.

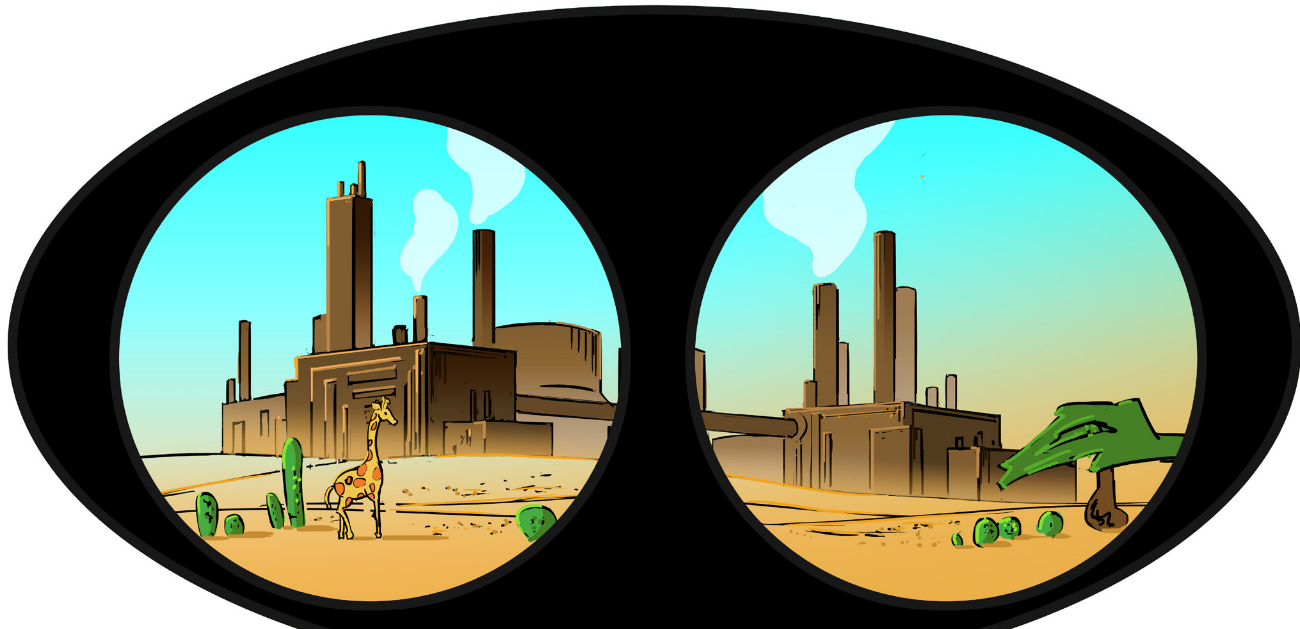
"WITH MORE LEGITIMATE CLAIMS THAN FINANCING AVAILABLE TO PURSUE THEM, CLASS ACTIONS SEEM LIKE THE IDEAL TARGET FOR ALF INVESTORS."

Funds will need to ensure a supply of high-quality class action suits to invest in, thus an essential dimension of this strategy includes establishing long-term relationships with these law firms. The motivation for law firms to engage in this relationship is twofold: to expand their funding base and spread capital risks. As private entities, Canadian law firms are comparatively less liquid than ALF firms that have the ability to raise capital in financial markets. This is especially true for small- and mid-sized law firms who can be prohibited from taking a case because they simply do not have the money to finance the litigation. Incorporating third party financiers to raise this needed capital represents a solution to this lack of liquidity and will enable law firms to take on cases they would not have been able to under the previous financing regime. Further, even large law firms with more substantial capital reserves can benefit from incorporating a third party financier, thereby diffusing the inherent risk involved in litigation. This could be accomplished through joint financing agreements or by allowing financiers to cover the credit spread on class actions that are perceived to carry risk higher than what many law firms will accept.

The relationship between investor and counsel would be long-term in nature. Both parties must accept that the process of litigation is defined by substantial risk. There is a high degree of speculation surrounding whether a suit will be successful, how long it will take to reach a court decision, and even higher uncertainty regarding how much the final award will be worth. Furthermore, significant trust must be established as limited information is disclosed to ALFs and they must look to the firms they have partnered with to make key decisions.

The Future of ALF

The ALF investment opportunity was born from amendments to century old legislation aimed at empowering the average Canadian to pursue legal claims they once could not afford. Today, ALF is practiced in many large Western economies, and with sentiment changing in the Canadian judiciary system, it will be a significant opportunity for Canadian investors. For ordinary Canadians, ALF represents a tremendous solution to illiquidity for class litigants. For investors, ALF presents the opportunity to create long-term relationships with law firms and generate substantial returns for shareholders. While the dust has yet to settle over the policy debate, it is certain that ALF will continue to be a viable investment opportunity for years to come.



MANUFACTURED OPPORTUNITIES

A lucrative investment opportunity in East Africa

By Shan Artani & Corey Obermayer

When thinking of Africa, poverty and war are themes that come to mind well before good investment opportunities. The continent, however, is on the tipping point of a manufacturing and export-driven boom not seen since late twentieth century East Asia. Despite the potential to monetize this growth, private equity remains sluggish in entering the region, making Africa the best destination for new private equity funds.

There is one region in Africa, the East African Community (EAC) – consisting of the stable nations of Tanzania, Kenya, and Uganda, as well as recovering Rwanda and Burundi – that holds great promise for private equity investment in the manufacturing sector. With low-cost labour, significant natural resources, devaluing currencies, and rising infrastructure investment, the EAC's underdeveloped, fragmented manufacturing sector is a prime entry point for a private investment strategy.

The opportunity is attractive as the EAC has recently undergone significant development, becoming a common labour and goods market. It is set to introduce a common currency and become both a monetary union and a single political federation by 2015. There is also potential for strong returns as companies within the region generally trade at lower EBITDA multiples and are less levered than those in Western Africa. Also, the EAC is still in its development stage leaving room for potential multiples expansion.

Labour's March from Asia to Africa

East Asia's low-cost labour has been a fundamental advantage drawing manufacturing from the West to the region. Due to China's recently rising labour costs, however, the World Bank projects that 80 million manufacturing jobs will be transferred out of the country, most of which will land in Africa.

The EAC is able to capitalize on this migration, as it is undergoing a powerful demographic transition. The working-age population is expected to climb from 53% to 60% by 2050. EAC's average monthly wage for low-tech manufacturing is also far below that of China, and even below other comparable African nations, such as Zambia. This labour supply has made Africa, and specifically the EAC, the new hot spot for low-cost labour.

"TAKING A RICARDIAN VIEW OF INTERNATIONAL TRADE, EAST AFRICA HAS THE LABOUR AND NATURAL RESOURCE ENDOWMENTS TO DOMINATE INTERNATIONAL TRADE, BUT ITS PRODUCTIVITY AND EXCHANGE POLICIES ARE HOLDING IT BACK."

Natural Resource Advantage

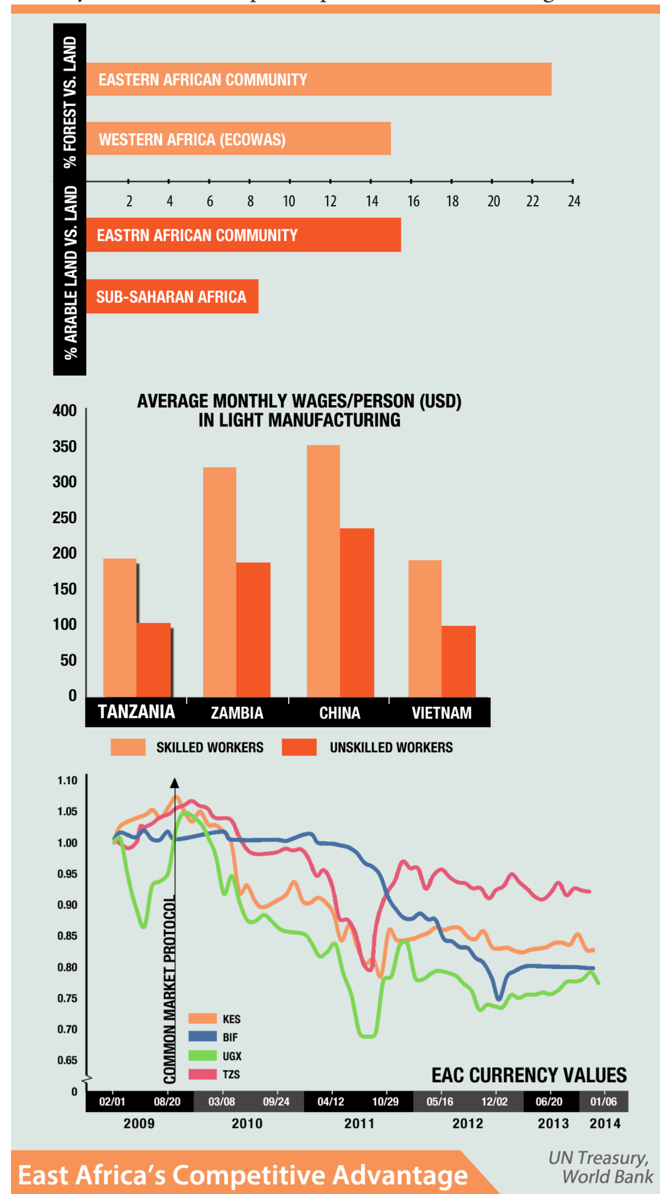
Another advantage of the EAC is its abundance of natural resources. The EAC has an even greater proportion of forest than

the Economic Community of Western African States (ECOWAS), and a greater proportion of arable land than the rest of Sub-Saharan Africa. This implies easy access to raw materials and a strong potential for industries such as timber production and low-tech manufacturing requiring arable crops (e.g., cotton) to develop in the region.

Bottlenecks

One historical obstacle for African nations has been their underdeveloped infrastructure, which is estimated to decrease the continent's annual real GDP growth by 2% and has reduced productivity by 40%. Manufacturing has been hit the hardest by unreliable utilities, with an estimated 13% of the working day being lost to power outages.

However, the situation is improving with the American private equity firm Blackstone set to invest $3 billion over the next five to ten years in African power products; contributing to the $25 billion invested in Africa's infrastructure annually. Driven by these investments, the United Nations Industrial Development Organization estimates per capita manufacturing value added (MVA) to be growing at 6.7%, and expects up to 9.7% MVA growth as infrastructure develops. This is not far from China's average MVA growth of 9% from 1980-2000. The improved infrastructure investment should lay the foundation for a much needed productivity boost.



East Africa's Competitive Advantage

Past the Tipping Point

In the 1980s, the Chinese government took action by consolidating the fragmented manufacturing sector into state-owned enterprises. It then encouraged private investments in China through tax breaks, strengthened private property rights, and legal reform. These reforms, cheap labour, and a stable currency helped propel China to a 9.5% average real GDP growth from 1987-2002, driven largely by manufacturing exports.

A closer look at EAC uncovers similar policy decisions, seeking the same results. The difference being that EAC nations, such as Tanzania, are currently encouraging privatization of their state-owned enterprises through improvements in foreign direct investment policies. This has spurred an attractive industry for foreign private investments, setting the stage for foreign private equity funds.

The small scale of fragmented manufacturers (with an average market capitalization of $50 million) is preventing them from being competitive. To combat these issues, the 2010 EAC Common Market Protocol trade-bloc has allowed capital and labour to flow freely within the region, allowing manufacturers to operate within a greater geography and benefit from accompanying economies of scale. As a part of this Protocol, EAC nations have also allowed their currencies to devalue, making exports more attractive to foreign consumers. Now, all that is needed to catalyze high export growth is foreign investment.

The Private Equity Play: Strategic Partnership and Consolidation (SPC)

Private equity funds, due to their large commitment and illiquid nature, have shied away from the region until recently. Of the cumulative $212 billion raised for private equity investments in emerging markets, less than 5% was committed to Africa. As a high level of capital committed to private equity globally sits idle, African manufacturing is sure to be a promising area for investment.

An SPC strategy will first involve joining forces with a large global manufacturing-intensive company and subsequently acquiring and merging multiple manufacturers in East Africa. Due to Africa's access to natural resources and low-cost labour, companies with experience in low-tech manufacturing will benefit more from the partnership. Low-tech manufacturing com-

panies such as 3M and Nike that have experience with production in Africa, but are not currently in East Africa, are likely to understand the landscape and create the most benefit from expertise and economies of scale.

The strategic partnership with a large global manufacturing player will be set up to create a holding company to act as an acquisition vehicle. This partnership, or syndication, will allow the private equity firm to leverage the partner's operational expertise, intellectual property, and relationships, which are instrumental in navigating and profiting in a regional market that is not yet mature.

Case Study: Helios Investment Partners & Telecommunication

The telecommunications industry in Africa in the mid 2000's was fragmented, with mobile penetration rates lagging behind more developed economies. This was blamed on the lack of coordination in the industry as well as poor management and human capital, making it an attractive target for the SPC strategy. When Helios, an Africa-focused private equity firm, set up shop in 2004, they partnered with Portugal Telecom to create the holding company AfricaTel, which purchased stakes in four smaller telecommunication companies. They recapitalized AfricaTel with debt, and have been working with Portugal Telecom to consolidate and grow the existing businesses, including further acquisitions. Having a large consolidated presence has allowed AfricaTel to benefit from leverage, while claiming a market-leading position, with an estimated IRR of 38-40%.

In a consolidation, or roll-up strategy, multiple acquisitions would be made within the same space and integrated by the holding company to grow the businesses into a stable and defensible player. One of the barriers to African manufacturing development is a lack of skilled labour and innovation in production methods. However, strategic partners can create operational advantages by transplanting best practices to acquired companies.

Consolidating and creating synergies is difficult, though plausible in a roll-up strategy. Even without operational integration, the consolidated entity will have increased debt capacity, as well as access to a larger universe of strategic buyers (including the strategic partner) and the option of an IPO. Manufacturing in East Africa is especially poised to benefit from increased leverage. The average leverage for public firms in East Africa is 9.2% compared to 21.7% in West Africa and 33.2% for all other emerging markets. This gives investors opportunity to lever up these companies, further boosting returns.

Execution

Manufacturing private equity deals only accounted for 21% of private equity in East Africa in 2013. This is largely due to investors shying away from smaller sized deals, with the average deal being $25 million, in contrast to a $37 million regional average. Therefore, a deal target around the $20 to $40 million average is recommended, as it will yield the maximum deal flow; though the consolidation strategy allows flexibility to pursue larger or smaller opportunities where sensible. Ultimately, the fund should attempt to build a consolidated entity with a dominant market position, which will require multiple acquisitions of this size, likely resulting in an overall entity value between $250 to $500 million.

Debt Financing

This private equity roll-up model requires access to debt. Private debt arrangements with investment funds are the most common source of debt for private equity, with a record $155 billion being invested in emerging market debt in 2013. Further, to promote African development, the World Bank has created programs to attract financing to the continent and increase investment attractiveness. The Bank offers loans to finance private equity transactions at a rate that is 3-6% less than market rates, and the Bank will also facilitate syndication with other debt providers and provide Private Equity Insurance. The insurance costs about 1% of insured assets per year for a maximum 15 years and $220 million to protect from war, political risk, and natural or economic disaster. A company must demonstrate developmental opportunities and long-term commitment to their projects. Private debt arrangements alongside World Bank financing are recommended as they lower the cost of debt while avoiding the inherent risks in other popular instruments such as Eurobonds.

Exit

It is important to plan an exit for investment opportunities to realize returns at the end of a private equity transaction. Portfolio companies have the option of exiting via an IPO on domestic exchanges, or on foreign exchanges; such as through the use of American Depository Receipts (ADRs). Although ADRs were the most common African IPO exits until the turn of the millennium, local offerings have been outpacing them since, and serve as an attractive form of exit.

Selling to a strategic buyer is another option if capital market development lags. The first avenue to explore is the strategic syndicate partner used through the investment period, especially if they are a strategic operation company looking to vertically integrate production in Africa.

Capital inflows to Africa are almost inevitably labeled "charitable" or "social." With its current economic trajectory, however, Africa is bucking this trend, becoming not just a place for social investment but the best opportunity for new private equity funds, period

MONSANTO: NEED FOR SEED

Every activist dreams of ending world hunger. But could a corporation universally hated by the same activists be able to bring more sustainable agriculture to impoverished African nations?

By Anderson PeterGeorge & Brad Wood

Monsanto is the leading producer of agricultural products designed to increase crop yields and reduce harvest volatility. These products fall into two distinct segments: herbicides and seeds. Like a pharmaceutical company, Monsanto invests heavily in R&D to develop products protected by intellectual property. These products are seeds modified through selective breeding and the insertion of genes from other species to gain traits such as resistance to herbicides, improvement in yield, and reduction in water usage. Monsanto then bundles them with the herbicide products they are designed to resist, and sells them.

Genetically modified (GM) seeds benefit farmers by increasing their productivity, with higher yields and less required labour offsetting the premium charged for the seeds. Further, in certain commodities it is not economical to grow unmodified seeds. As with pharmaceuticals, the barriers to entry are high due to IP development costs. Monsanto currently has a competitive advantage over DuPont and Syngenta, the other major crop science firms, who rely on licensing Monsanto patents.

Over the next 20 years, the global population will rise 17% to 8.4 billion people. Demands on agricultural productivity will rise as per capita food consumption in developing countries increases with prosperity. Monsanto is well positioned to deliver solutions to farmers worldwide.

Shifting Soil

Misinformation about Monsanto's products and enforcement of intellectual property has garnered criticism from environmental and health activists. There is scientific consensus that Monsanto seeds are safe for consumption with regulatory approval from bodies including the Food and Drug Administration. Nevertheless, activists argue the long-term effects of GM foods are unknown, and call for mandatory consumer labelling on all products containing genetically altered crops. This would result in labelling on 70% of items in a typical North American supermarket.

The risk inherent in Monsanto's business can be seen from the EU's introduction of mandatory consumer labels in 2004. Worried that GM foods would be less appealing to consumers, food manufacturers switched to higher cost non-GM ingredients. For example, Coca-Cola and Pepsi switched from GM high-fructose corn syrup to regular sugar. These decisions decimated Monsanto Europe, and in 2013 they stopped seeking regulatory approvals on the continent.

Monsanto realizes 60% of their revenues in North America, where similar arguments seeking mandatory labelling are currently underway. To prevent this eventuality, Monsanto and their competitors engage in heavy lobbying. However, these decisions are predominantly outside of corporate control, so strategies to alleviate the potential damage a regulatory ruling could cause in the US should be employed. Monsanto should diversify revenues into international markets.

Predicting The Weather

Monsanto has already made moves to increase its competitive positioning. In the fall of 2013, Monsanto acquired Climate Corporation, a Silicon Valley start-up that has developed mod-

els to forecast the impact of weather and climate on agricultural development. By integrating these models with soil conditions and historic crop yields, they offer crop insurance to farmers. Their product, called Total Weather Insurance, automatically sends payment to the insured farmers as soon as certain weather conditions occur. This has the advantage of not requiring verification costs, unlike other crop insurance products.

With this acquisition, Monsanto is looking to optimize profits by moving towards offering an integrated bundle of agriculture products and services. First, they provide advice tapping into the Climate Corporation's expertise, on which crops to plant, and when to plant, fertilize, irrigate, spray, and harvest. Second, they sell seeds genetically optimized for particular climate locations, and herbicides to which these seeds are resistant. Finally, Monsanto offers insurance to reduce the risk of crop loss. The expansion into insurance in particular gives Monsanto the potential to capture market share from its competitors. Understanding its crop technology and advice will minimize the risk of crop loss. Further, a discount can be offered on insurance premiums if farmers plant and spray Monsanto products.

The move to integrated services also affords Monsanto protection against patent expiry. The patent for Monsanto's first generation Roundup soybeans is expiring in 2015. So far, about 50% of farmers have converted to their new Genuity Roundup seeds, but this remains a risk for future patent expiry. The other aspect of this integrated offering is providing seeds that are tailored specifically to the geography and soil of certain regions. Monsanto's product pipeline includes a number of innovations that could have a substantial impact on agriculture in developing nations. Among the developments are drought resistant corn, and higher yielding wheat crops. These products coupled with this new full service business model have the potential to deliver a high adoption rate for new products.

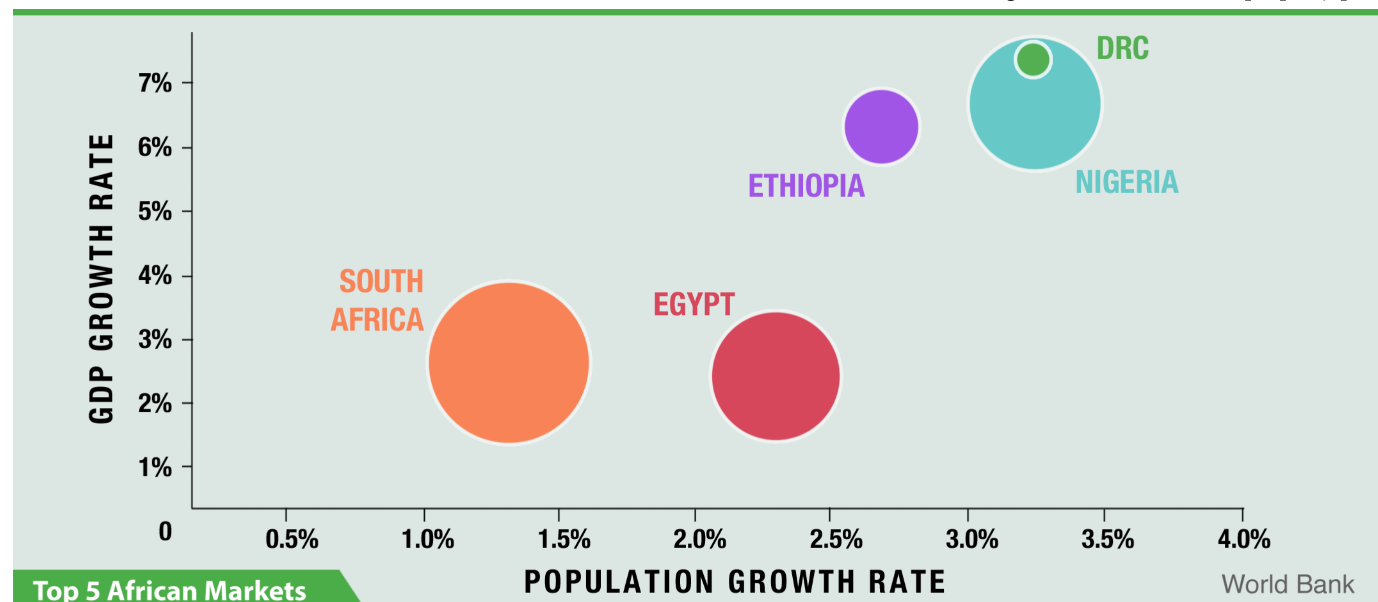
The opportunity for GM crops to improve agriculture in developing economies is substantial, especially because the current production in these countries is far less efficient than in countries with industrialized agriculture practices.

Where To Plant?

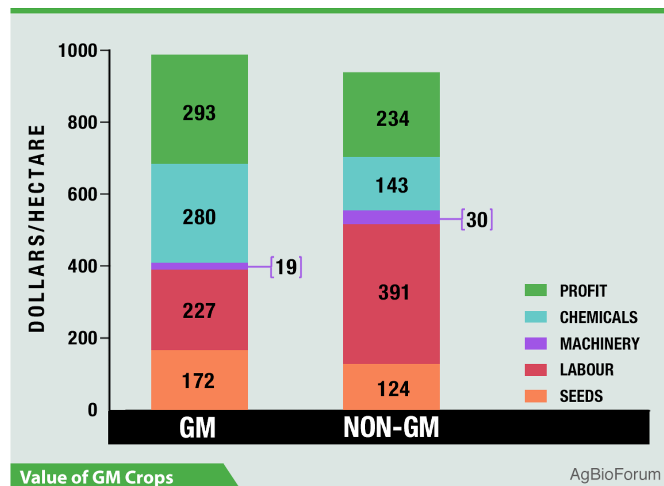
High economic growth, foreign direct investment and swelling populations make African countries prime hunting ground for savvy investors. In Sub-Saharan Africa, crop yields are the lowest in the world, creating opportunity for Monsanto's products to have an enormous impact. Sub-Saharan corn farmers realize 2 tonnes per hectare, while North American growers are able to harvest close to 9 tonnes per hectare. Some of this disparity is explained by inefficient agricultural methods and limited technology in Africa, but part is also due to the lack of GM crops. As an example, the introduction of Monsanto corn in the Philippines, where agricultural sophistication was low at the time of introduction, increased yields by 24%.

Monsanto already has a market share of 40% in South Africa, serving as a solid base for expansion to other countries. In order to spread fixed costs, develop a word of mouth reputation, and establish relationships with government and distributors, Monsanto should cluster its resources and target a specific country. Nigeria has the fastest growing market in Sub-Saharan Africa with a current population of 170 million projected to increase to 400 million by 2050, and current annual GDP growth of 7.6%, making it a prime candidate. Despite 60% of the current population working in agriculture, the country is still a net importer of food. The government estimates that only 10% of the arable land is optimally employed. Nigeria's government recognizes the problem and Akinwumi Adesina, the Agriculture Minister, is taking an active role to promote rationalization and investment, including construction of a new fertilizer plant. In contrast to neighboring Uganda and Kenya, the government has not taken a stand against GM seeds.

There are many hurdles to overcome in order for Monsanto to succeed in Africa, including the weak intellectual property pro-



Top 5 African Markets



Value of GM Crops

tections, and an inability for farmers to finance their business needs. In the Indian market, farmers took on debt to purchase Monsanto seeds, and, after crop failures, hundreds of farmers committed suicide. Monsanto was blamed for these deaths. While this issue is far more complex, these accusations have been made because some farmers in the developing world have struggled to pay the higher prices of GM seeds particularly when adverse weather conditions precipitate crop failure. Incidents of this nature hurt Monsanto's ability to penetrate already skeptical developing markets.

Choosing The Crops

Adoption of GM seeds and the economics of farming in Africa can increase seed costs by 35%, but improved yields lead to an increase in total profits. To successfully create these benefits in Nigeria, Monsanto must adapt to the unique dynamics of the developing African market, address IP risk, find a way to solve farmers' inability to pay for Monsanto seeds, and ensure that farmers are using methods that facilitate the benefits of GM seeds. Monsanto's business model in North America cannot simply be transplanted into a fundamentally different business environment.

Funding the Purchase

The first issue that Monsanto will face is overcoming farmers' inability to pay for Monsanto seeds and related services. Given previous experience with farmer's taking on debt to pay for Monsanto seeds, they should instead provide seeds to farmers for free. Monsanto would seek to recoup its costs from farmers at the end of the growing season, when they would take a share of the farmers' revenues.

Ancillary Services

Further, Monsanto should leverage the resources Climate Corporation provides to actively offer farmers advice and best practices to ensure optimal yield. Not only will yield increases improve the revenues that Monsanto sees, but it will ensure that farmers see a clear benefit to the engagement with Monsanto, leading to a sustained relationship.

Repayment Risk

While this new inverted revenue model would help to drive adoption, there is a large repayment risk that Monsanto will be accepting. As such, Monsanto should expect to take losses on some first generation relationships with farmers; however, this will be a short-term pain. Rather than pursue the traditional route of suing these farmers, Monsanto should simply endure the loss and stop doing business with them. Over the long term, farmers will see the financial benefit of allying with Monsanto and unpaid debts will decrease. Monsanto can also decrease the downside risk by implementing a phased pilot approach, where they decrease the overall risk exposure in early stages of expansion by working with farmers that have a lower risk to default (larger farm size, willingness to adopt). This pilot project will set a precedent for neighbouring farmers and increase the amount of farmers wanting to do business with Monsanto.

Payment risk can also be avoided through working with other organizations that buy food from farmers. By inserting itself in the selling process, Monsanto ensures that it can collect its payment by taking its cut out of the food buyer's payment before passing it on to the farmers.

New Products

The potential value of this solution is furthered by Monsanto's pipeline of new products, which have the potential to deliver extraordinary value in Africa's drought stricken growing conditions. Monsanto and BASF are collaborating to produce stress resistant crops, including those, which can be grown with less water and under hot conditions. The current generation of these seeds are not effective enough to be commercially viable, but it is conceivable that within a decade Monsanto could possess a revolutionary new seed technology. If Monsanto establishes a distribution network and relationships now, it will be ideally positioned as these innovations reach market.

Sowing The Seeds

Economic historians argue that it was the advancement of agricultural techniques in eighteenth century Britain that brought about the industrial revolution. The application of enclosure, crop rotations, and selective breeding to farming freed up labour to work in more value added industries. Currently, 41% of Nigeria's GDP is agriculture based, and by driving improvements in agricultural productivity, Monsanto can be an agent to stimulate economic growth in other areas.

Through simple innovations in its business model, Monsanto has the opportunity to diversify away from its North American regulatory risks, increase overall revenues, and position the company for long-term success in a rapidly growing market.

SKY IS THE LIMIT

The South African sugar cane industry has been struggling for years and agricultural drones may be long-awaited solution

By Patricia Wong & Chendi Zhang

Facebook caused skeptics to blink twice at the beginning of March when it purchased drone manufacturer Titan Aerospace in the hopes of using drones to bring wireless internet to Africa from near-orbital heights. This is not the first time internet from the skies has been proposed; Google announced in May 2013 that it plans to do the same with proprietary balloons. While network infrastructure is important to fuel the growth of the developing continent, drones in Africa may be more useful closer to the ground.

Loss in a Stagnant Industry

Sub-Saharan African economies depend on agriculture, which has been struggling to find comparable crop yields to other developing nations. Drones have the potential to offer immense productivity gains in agriculture - but that's not an industry secret. Drones have already been used in Japan's agriculture for decades, with the Yamaha RMAX drone being used to spray 30% of the country's crops for more than 20 years. In fact, farmers in similarly developed nations have started to implement drone technology to monitor crops, often doing so illegally. With the US Federal Aviation Agency, Transport Canada, and the European Aviation Safety Agency banning drones through various regulations, drone usage in agriculture has failed to take flight.

"DRONES HAVE THE POTENTIAL TO OFFER IMMENSE PRODUCTIVITY GAINS IN AGRICULTURE - BUT THAT'S NOT AN INDUSTRY SECRET."

However, these regulations are non-existent in South Africa. With the absence of this major barrier, South Africa can reap the benefits from this astounding technology.

Compared to South America and Asia, which have seen cereal yields rise by 300% over the past 40 years, African agriculture yields have remained comparatively stagnant. Interestingly, while production of major crops such as maize and wheat have not varied significantly since 2000, sugarcane production has seen a persistent decline. This decline is most prevalent in South Africa, dropping 33% from 2000-2011. With sugarcane production accounting for 11% of South Africa's labour force, the country has a lot at stake if outputs continue to drop. With lack of regulation on drones in South Africa, this revolutionary technology may have the ability to save the country's sugarcane industry.

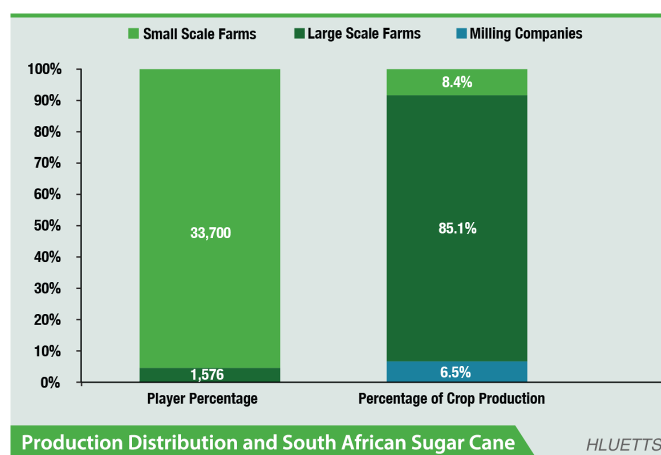
South African Spoilage and Productivity Problems

Spoilage is and always has been a significant challenge in the world of agriculture. The United Nations Environment Programme (UNEP) estimates roughly one third of all food produced in the world (1.3 billion tonnes) was lost or wasted in 2013. Yield loss due to pests and disease are particularly high in the sugarcane industry, with spoilage levels as high as 10% of total yield, making it the third most damaged crop out of Africa's top seven field crops. With such a high percentage of yield and portion of profits being lost due to spoilage, it is imperative that African farmers improve their monitoring and disease pre-

vention techniques to maximize the output of their sugarcane fields.

"WITH LACK OF REGULATION ON DRONES IN SOUTH AFRICA, THIS REVOLUTIONARY TECHNOLOGY MAY HAVE THE ABILITY TO SAVE THE COUNTRY'S SUGARCANE INDUSTRY."

Additionally, the sugarcane industry has been affected by poor farming practices across the continent, resulting in decreased productivity on a per acre basis. Farm owners often employ a spray-and-pray approach, where they buy up a large amount of land and spray intensive amounts of crops in the hopes of achieving higher yields. With fertile farmland becoming increasingly scarce, farmers need to focus on optimizing the yield of their property, rather than continuously buying up the finite land.



Production Distribution and South African Sugar Cane HLUETTS

The South African sugarcane industry, along with the rest of the continent, has consistently lagged behind the rest of the world in regards to agricultural technology. Most global farms are highly capital intensive, while sugarcane farms instead are highly labour intensive,utilizing a large amount of manual labour to plant, monitor, and harvest crops. The reliance on physical labour can lead to higher levels of error, and greater inconsistencies in tending to crops. A key obstacle preventing technological progress is the current lack of infrastructure, specifically roads and access to fuel sources. When moving forward with new agricultural technology, farmers must focus on implementing changes that are independent of existing supporting infrastructure.

"WHEN MOVING FORWARD WITH NEW AGRICULTURAL TECHNOLOGY, FARMERS MUST FOCUS ON IMPLEMENTING CHANGES THAT ARE INDEPENDENT OF EXISTING SUPPORTING INFRASTRUCTURE."

Making Drones a South African Reality

Drones have the potential to be the high-flying solution that the South African sugarcane industry needs. According to a Yamaha executive, drones similar to the RMAX could improve crop yields by 15%, a figure unheard of in the past decade. Additionally, implementation of these drones would not be not limited by the lack of South African infrastructure and can be implemented on large-scale farms. But while drones may decrease spoilage and increase productivity, the price and any potential learning curve for the new technology, still presents concerns for farmers.

The RMAX, Japan's drone-of-choice, requires significant investment, training, and skilled labour which could restrict adoption in South African agriculture. This high investment is due to the drone's specialized ability to spray crops with pesticides. However, the decrease in yield in the South African sugarcane industry stems from spoilage and productivity problems, which can be reduced through a more efficient monitoring practice. As such, investing in a drone that only monitors the crops, without the pesticide spraying abilities, would offer substantial benefits at a fraction of the cost. The LP960 is one such example, priced at $9,300 compared to RMAX's $120,000 price tag.

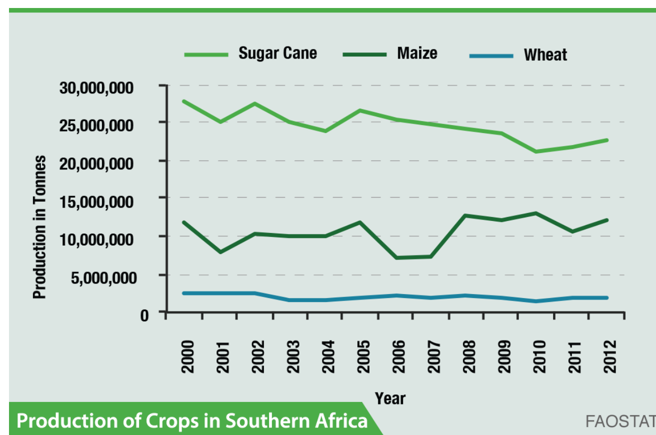
Flying Towards an Efficient Future

The LP960 detects damaged crops by taking aerial images with a thermal camera, while also monitoring moisture levels, pests, and diseases. With motion, heat and infrared detectors, these drones are able to identify pest infestations and upcoming diseases before they spread, preventing wide scale crop loss. By identifying crop diseases before they spread, farmers can significantly reduce spoilage, increasing yield and productivity. Farmers can also spray a precise amount of supplements over the crops that are most in need, rather than an entire field, thereby reducing the number of crops that become unusable from over-spraying or under-spraying.

Additionally, productivity can be increased as the number of farmers' labour hours needed to monitor the crops is reduced, allowing them to focus on higher value added tasks. By utilizing drones, a strategic shift can be made by using saved labour hours to instead analyze the information collected by the drones regarding the sugarcane, soil, and growing conditions; all information unavailable in the past. Access to this data may reveal significant improvement opportunities and trends in planting and harvesting operations that large-scale farmers can focus on in order to improve their farming practices in the long-term.

The Value Cane

The South African sugarcane industry is comprised of small and large-scale farmers. These farmers supply the sugar cane to larger multi-national milling corporations (MNMC's), the largest of which are Illovo, TSB, and Tongaat-Hullet, all of which own their own sugar estates. Due to the fragmentation within the farming stage of the market, successful implantation of drones will have to be integrated from the top of the value chain. This presents an opportunity for milling companies, which could purchase fleets of drones and offer an operating lease program with the large-scale farmers. These MNMC's will be able to offer the drones at a reduced cost, while also offering training to farmers that would be unavailable if the drone was purchased individually. While large-scale farms only account for 5% of the industry, they produce 85% of the industry's crop yield. Given that scale, MNMC's will be able to invest significantly less in drones on a per farm basis with the greatest possible gains in yield, eliminating the need for capital expenditure from cash-strapped farmers.



Production of Crops in Southern Africa FAOSTAT

"MNMC'S WILL BE ABLE TO INVEST SIGNIFICANTLY LESS IN DRONES ON A PER FARM BASIS WITH THE GREATEST POSSIBLE GAINS IN YIELD, ELIMINATING THE NEED FOR CAPITAL EXPENDITURE FROM CASH-STRAPPED FARMERS."

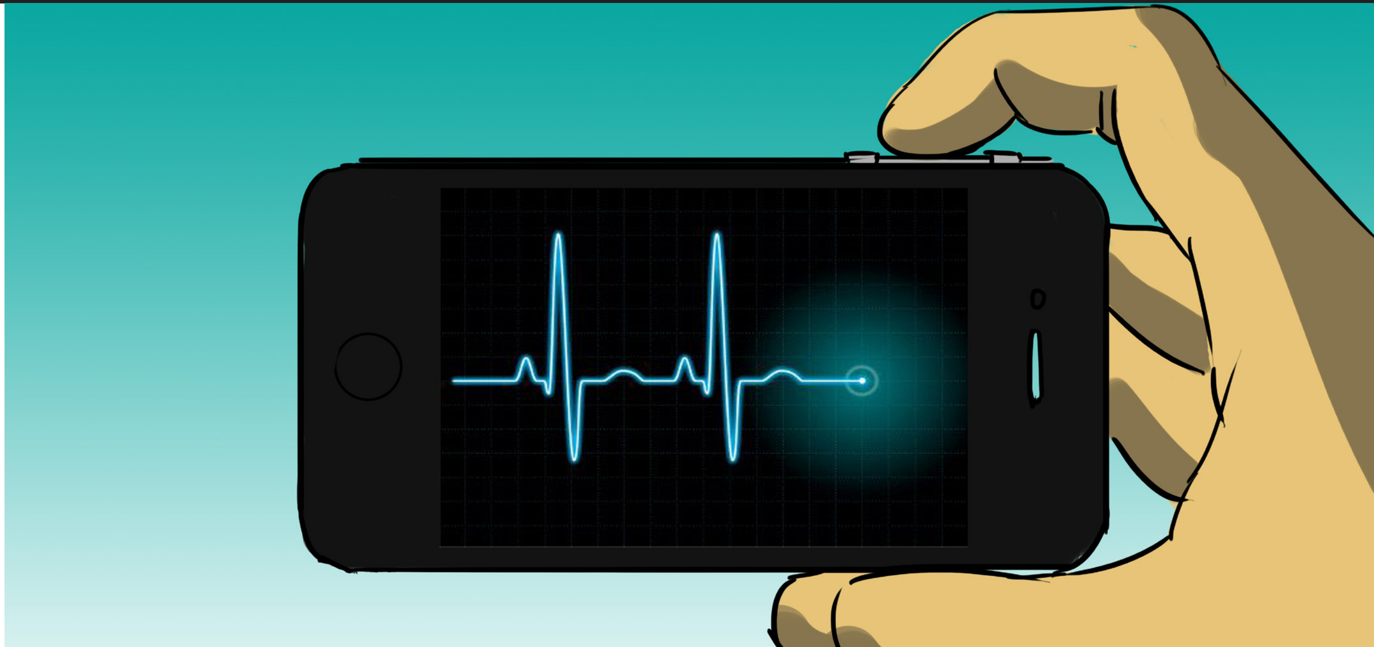
More Cane, More Coin

By offering drones to large-scale farmers through an operating lease, MNMC's will see returns from incremental operating lease revenues and also increased crop yield volume due to improved product yields. Tongaat-Hullet (TH) for example values a hectare's worth of sugar cane at approximately $1,000, considering the average size of a large-scale farm is approximately 1,200 hectares. The total value of cane produced by a large-scale TH customer is roughly $1.2 million. This implies that the breakeven point for the MNMCs would be reached at a marginal 0.77% increase in yield. This makes an operating lease an attractive proposition. Considering such a low breakeven point, TH experiences very little risk by investing in drones. Furthermore, the low cost on a per drone basis would allow for MNMC's to risk very little capital on the project.

However, TH and other MNMCs will only be able to reap the benefits of this investment if large-scale farmers are willing to pay for the operating lease. The best option is for MNMCs to lease the equipment on an 'as-required' basis, circulating the asset between farms in the interim. Farmers would require the drones every six weeks to monitor the crops prior to spraying pesticides. If the MNMCs can share the asset among three farmers, and assuming a five-year lifetime, MNMCs could charge up to $65 per day before farmers would be better off buying their own drone. At that cost, the value proposition to sugar cane farmers is immense. Considering that the LP960 can scan a 1,200 hectares area in a day's time, and that the total labour cost for preparing land reaches approximately $26 per hectare per year, should these costs drop by as little as 2%, large scale farmers would experience cost savings through the use of drones. This, compounded with yield increases, would further improve profitability

"BY MAINTAINING THE CONTROL OF THE ASSETS AT THE TOP OF THE VALUE CHAIN, MNMC'S CAN ENSURE SUBSTANTIAL INCREASES IN PRODUCT YIELD, WHILE SIMULTANEOUSLY PASSING COST SAVINGS ONTO ITS SUPPLIERS, THE FARMERS."

While farmers worldwide seek the added benefits of implementing drones, the South African sugar cane industry may be one of the sectors where it can have the most drastic impact. The use of drones by single large-scale farmers is far too capital intensive and offers little benefit to the industry as a whole, given the upfront cost. By maintaining the control of the assets at the top of the value chain, MNMC's can ensure substantial increases in product yield, while simultaneously passing cost savings onto its suppliers, the farmers. Through this model, the South African sugar cane industry can continue to grow, potentially reaching unforeseen heights in the future.



AN APP A DAY

How WellPoint can use mHealth solutions to cut costs in order to increase profitability under the Affordable Care Act

By Adam Ibrahim & Jeff Hynes

The introduction of the Patient Protection and Affordable Care Act (ACA) in 2010 has created a paradigm shift in the American healthcare landscape. Four years later, with regulations coming into full effect, insurance companies are seeking a cure.

Partisan politics and "death spirals" aside, there is a serious concern over the effects of the ACA's tough restrictions on insurance pools and policy pricing. Healthcare spending exceeded over 17% of American GDP in 2011 (US$2.8 trillion) and is set to rise even further. With an aging population, rising obesity, and other chronic conditions, insurance companies are faced with increasing medical costs. In the past, most of these costs were passed on to the patient, however, with the introduction of the ACA, the burden has shifted toward insurance companies.

WellPoint is largely at risk in this scenario. With total revenues of over $71 billion in 2013, WellPoint is the largest health insurance company to fall under the American Blue Cross umbrella. WellPoint has altered its strategy over the past four years from being a provider of high cost plans for the extremely ill, to receiving almost half of its revenues from government subsidized Medicaid and Medicare programs. To date, this strategy has been successful. However, with a medical loss ratio (MLR: the ratio of medical expenses to premiums) of over 85%, WellPoint faces higher pressures on its margins relative to peers like UnitedHealth, which has a ratio of only 81%. Faced with a difficult future under the ACA, now is the best time for a novel cost cutting approach.

"WELLPOINT FACES HIGHER PRESSURES ON ITS MARGINS RELATIVE TO PEERS."

Health Prognosis

The intense bureaucracy and heavy regulation in the American healthcare industry make it complicated and difficult to navigate. Numerous players have differing interests, creating pressure and competition within the value chain. Physicians aim to increase billables, insurance companies look to decrease costs, and patients seek quality healthcare at a reasonable price.

For insurance companies, chronic conditions such as diabetes represent a massive and ongoing expense. The average diabetes patient spends $13,700 on healthcare per year, more than 2.3 times that of a healthy patient. Furthermore, spending on diabetes management is growing at 8.2% per year, faster than the overall healthcare market. This is partly because the healthcare system has been primarily set up to treat acute conditions. The prevalence of such conditions is increasing due to a sedentary and aging population, placing an increasingly heavy load on a system designed for one-time problems.

Within this system, insurance companies have the ability to determine which treatments to cover under a policy. As of 2012, private and government healthcare plans provided coverage to 85% of Americans, which is expected to rise as the ACA comes into full effect. Patients are highly price sensitive for out-of-pocket expenses, especially on preventative care, whereas insur-

Health Care Expenditures

ance companies seek value for money spent on patient insurance policies. This means that they are willing to pay upfront in order to reap savings over the lifetime of the patient.

(Un)Affordable Care

The eventual outcome of the ACA's sweeping legislation is speculative; it is hard to imagine health insurance companies surviving with the stringent restrictions on policy pricing and patient acceptances. These limitations include having a medical loss ratio that exceeds 80%, a prohibition on rejecting those with pre-existing medical conditions, an inability to charge higher premiums for patients with medical conditions, and an inability to charge seniors more than three times the lowest premium.

These limitations will end up shifting WellPoint's patient demographic. Those with pre-existing problems who were unable to get insurance before the ACA will be the first in line to receive benefits. However, healthy younger patients may decide to test their luck with the fine of one percent of yearly household income rather than sign up for insurance coverage. The result is a tipping of the health insurance pool towards the elderly or those with pre-existing conditions, creating a top-heavy expense pyramid. To date, of the 2.7 million young low-cost adults, ages 18 to 34, needed to balance the expenses of high-cost patients, only about 1.6 million have enrolled. This leaves 55 to 64 year olds representing over a third of the new signups and insurance companies left to foot the bill.

Pioneering A New Solution

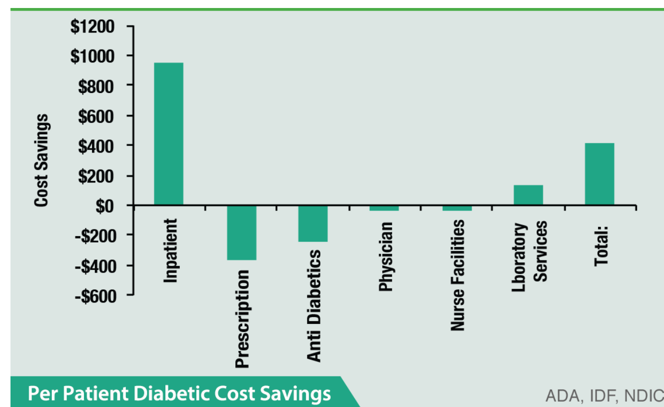
Given these restrictions, reducing costs may be the only option for increasing profitability. UnitedHealth, the largest provider in the United States, is attempting to do so by changing its cost system to a "pay-for-care" model, which focuses on quality of care instead of billing by time. Early implementation of the model will be difficult due to the high buy-in required from doctors and uncertainty in defining and measuring quality.

Considering the inherent problems with the pay-for-care model, WellPoint should pioneer a new technique to cut costs and differentiate its offering through the use of mobile health devices (mHealth). The emergence of more powerful mobile devices and constant connectivity has sparked the creation of the mHealth industry. mHealth products range from personal diet iPhone applications to mobile body biometric monitoring devices. Such products offer new and innovative solutions for tackling healthcare issues, especially in the monitoring, treatment, and prevention of chronic conditions. However, many mHealth start-ups lack the resources to obtain FDA approval and penetrate the market. By actively seeking out and collaborating with these small firms, WellPoint can acquire technologies to help cut costs by increasing efficiency and reducing hospital visits.

A Possible Antidote

Biosense, an Indian mHealth firm founded in 2008, is an intriguing candidate. The company's uCheck product allows patients with chronic conditions to accurately test and analyze urine or blood samples within their own home. Priced at only $80, the product uses a smartphone to analyze changes in various indicator strips and provides real time results.

Biosense has had difficulty effectively monetizing its product in the competitive and highly regulated healthcare space. Unexpected enforcement in the FDA's risk-based rules has forced Biosense to remove its product from the market while it applies



Per Patient Diabetic Cost Savings

for a Class II device approval. The approval process for mHealth devices is faster and less expensive than traditional pharmaceutical products, requiring around one year for FDA approval and costing between $250 thousand and $1 million. Relative to traditional pharmaceutical products, which can take upwards of six years and cost $100 million for approvals. However, for start-ups, these costs are still prohibitive. With limited resources and experience, Biosense presents an ideal opportunity to test the partnership plan.

The estimated reduction in lab visits would significantly decrease costs. A diabetic patient for example, would generally have to submit between two to four A1c hemoglobin tests per year at a lab. Instead, the uCheck could be used to perform the majority of tests, submitting to a lab test only in cases of abnormalities and for occasional verification. Patients with other conditions that require monthly testing, such as those with kidney problems, would benefit even further.

Additionally, uCheck will be able to monitor and discourage medical non-adherence. Surprisingly, an average patient follows only 80% of their medication doses accurately and upwards of 50% of all diabetics fall below this line. The uCheck can perform a number of tests and indicate if a patient is adhering to medication usage and lifestyle choices. Furthermore, test results could be used to prescribe more accurate medication plans and tweak chronic illness management techniques. This allows for a cost efficient method of preventative care, which is far cheaper than treating issues as they arise.

WellPoint had annual medical expenditures of $56 billion in 2013, and diabetes-specific costs of approximately $3.7 billion. Direct savings alone for partnering with Biosense could be up to $283 million, equating to $420 a year per patient. Given that the overall investment cost is approximately $21 million, WellPoint would only require a 10% adoption rate among diabetics to break even within the first year.

WellPoint could achieve considerable savings by extending this strategy to other illnesses, given that chronic diseases account for 75% of all American healthcare spending. Total savings for the company could be as high as $3.2 billion by using mHealth devices to shift towards preventative care for chronic illnesses, reducing WellPoint's effective MLR to 80.2%. Applying this cost savings model to the whole American healthcare system would result in $160 billion in savings.

3 The ideal structure for bringing a product like uCheck to market, while ensuring WellPoint can capitalize on the savings, is through the creation of a time-limited, exclusive partnership. The arrangement would allow WellPoint to be the exclusive user of uCheck for a negotiated period of time after FDA approval. The duration of the partnership would be determined in part by WellPoint's estimation of adoption rates. Biosense would also receive assistance from WellPoint in navigating the FDA, along with testing and improving its products. Additionally, WellPoint would agree to distribute uCheck to a subset of its patients that will benefit the most, including diabetes patients.

Misuse, or lack of use by patients, may destroy much of the value in supplying an mHealth device. WellPoint will need to incentivize patients to use the product by offering yearly rebate checks to patients who follow the usage plan. While this would reduce revenue from premiums, the savings extracted from a higher adoption and adherence rate would offset the losses. Furthermore, resistance to mobile technology may limit adoption among elderly patients, providing a hurdle in tapping into this market that will represent about a third of new signups.

A further barrier to entry may be the physicians themselves, especially if implementing the mHealth device will reduce billable check-ups. A solution to appease this segment is to allow doctors to continue to do the majority of the analysis. Test results would be transferred securely to the healthcare professional, with insurance companies reimbursing them for their work. Therefore, the majority of savings will come from the prevention of far more expensive hospital visits, and from reduced laboratory processing fees.

A final risk is the potential liability on the part of both the manufacturer and insurance company that has yet to be tested in court. Both parties could be held under the same responsibility as the practitioner in the same circumstances. This liability must be limited by ensuring that the device is not used as a diagnosis tool. As such, any abnormalities in testing would be referred to a doctor for further follow-up.

Many insurance companies will struggle to adapt to the post-ACA world. An mHealth solution is an opportunity for WellPoint to come out relatively quickly by breaking new ground on a technological front. Searching for products like uCheck to bring to market will allow WellPoint to better serve patients, differentiate policies, and improve their ailing medical loss ratio. Perhaps this is just what the doctor ordered.

DESTINATIONS

	GATE	ARRIVAL
INDUSTRY IMPACT	OW	FASTER
GLOBAL ASSIGNMENTS	OW	FASTER
SENIOR CLIENT CONTACT	OW	FASTER
CAREER DEVELOPMENT	OW	FASTER
MAKE PARTNER	OW	FASTER
	OW	FASTER

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